A Post-graduate Lecture
ON
INTRA-CRANIAL TUMOURS.

Delivered in connexion with the London Post-graduate Course at the National Hospital for the Paralysed and Epileptic, Queen-square, on Nov. 23rd, 1893,

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GENTLEMEN,—The first case to which I wish to draw your attention to-day is that of the patient before you. He is a man thirty-five years of age, who was sent to me on June 30th last by Dr. Gibson of Launceston, Cornwall, and he was admitted to the hospital under the care of Dr. Hughlings Jackson, who was kind enough to entrust the case to me. The man complained of epileptic seizures which affected the left side and to which he had been subject for years. More recently there had been superadded definite weakness of the same side, more especially of the leg. His history was that at the age of fifteen—i.e., twenty years before admission—one day after rolling down a bank he had a fit commencing with loss of power in the left leg. He then felt his head go round and lost his senses. On coming to he could not use the leg. For several years after this he remained quite well. He then had a fit of the following character: he experienced a cramping feeling in the left calf of the leg, after which the knee was flexed; the hip was next affected, and then the fingers of the left hand, which felt as if splitting; the arm was moved from the side, the head and face were turned, the trunk was jerked, and he lost his senses. He remembers no loss of power on recovering, which he did in a few minutes. Such were the fits which he continued to have at intervals of months or years until four years ago, when he had either one severe fit or a series of them, after which the left leg was paralysed. It gradually improved, but has never regained its power completely. During the last four years the fits have not been attended with loss of consciousness. They commenced with a "pop" in the right side of the head, followed by a feeling of tearing in the left iliac region, and this was succeeded by a drawing up of the leg and a similar affection of the corresponding arm and face; after a fit the arm and leg were completely but temporarily paralysed. But there have also been much slighter fits, confined only to the leg, and others in which the arm only was moved; this last variety, however, was always preceded by a sensation in the leg. On admission he was found to present a certain amount of rigidity of the left leg and to walk with a slight but characteristic hemiplegic gait. The weakness was chiefly manifested in trying to dorsiflex the foot. There was also a slight clumsiness in carrying out fine movements with the corresponding hand. The face was not affected, and there was no tenderness of the scalp, although shooting pain on the left side just above the superficial auditory meatus was complained of immediately before the attacks. The lightest touches were felt everywhere, as well on the left as on the right side, but there was definite impairment in the power of localising these all over the left side. The left knee-jerk was exaggerated, ankle-clonus was present on that side, but not on the other, and the wrist-jerk and elbow-jerk on the left side were more marked than on the right. The optic discs were normal. There was no history of epilepsy or accident, and, indeed, nothing in the family or personal history of the patient to throw light on the nature of the malady. Such is the description of the patient's condition on admission to the hospital. As you will have seen, however strong suspicion might be that there was some actual organic brain lesion underlying the symptoms, there could not be said to be in the symptoms any actual proof of its nature. Definitely localised fits—fits of so-called Jacksonian epilepsy associated with the onset of, or more usually subsequent to, hemiplegia in children—are common enough as a result of actual organic brain disease, vascular or inflammatory. In adults they may also occur if the hemiplegia dates from infancy, but in this case the history of the occurrence of many fits before the onset of the weakness was clear and unmistakable. If, on the other hand, a tumour was thought of as the most likely cause, it would have to be supposed to be one of excessively slow growth, and there were absent all three of the symptoms commonly regarded as more or less essential—viz., headache, vomiting, and optic neuritis. For several weeks he was kept under observation. The fits, which occurred almost daily, were of the character of the slighter ones which I have already described, and there was no loss of consciousness. No change was observed in the discs until Sept. 19th, when it was noted that there was slight but distinct optic neuritis in both eyes, an observation confirmed by Mr. Marcus Gunn. It was now evident that we had to deal with a tumour, and, being then in charge of Dr. Jackson's beds, I asked Mr. Horsley to see the patient with a view to operation. He agreed that the tumour was in or near the cortex and advised its removal. I need not recount to you the details of the operation. It will be sufficient if I tell you that a tumour was found at the upper part of the fissure of Rolando penetrating into the white matter of the brain, and that it was successfully removed. The immediate effect was increased weakness of the left side. The arm has remained weak, but is gradually recovering; the leg is now as strong as before the operation. There have been no fits, and the optic neuritis has almost disappeared.[1]

I now show a patient whom I have had under observation for several years. She was admitted as an in-patient under Dr. Gowers' care four years ago, with distinct left-sided weakness, a history of fits of somewhat indefinite character—these had only been very few—and she suffered from headache and occasional sickness. There was well-marked optic neuritis. There was nothing obtainable in the history to indicate the nature of the growth, which was undoubtedly present, but she was treated with iodide of potassium. Her recovery was not rapid, but she did improve so as to be able to go out in a few months, and she has remained well ever since. She is now, as you see, able to walk well; her neuritis disappeared before she left the hospital and has remained absent ever since, and there has been no recurrence of the symptoms. Where the tumour was it is not easy to say. It was evidently in the right hemisphere, and it was probably near the surface. What its nature was is also uncertain, although the disappearance of the symptoms under treatment with iodide of potassium is suggestive. But I do not think that this is conclusive, for undoubtedly certain tumours do subside in the brain or at least become quiescent both with drugs and without them, and I should hesitate to say that the disappearance of all the symptoms in a case of cerebral tumour under the influence of iodide of potassium is conclusive proof of the nature of the tumour.

I have another case here to which I would direct your attention. The patient is at present under the care of Dr. Hughlings Jackson, who has kindly allowed me to show him. This boy, thirteen years of age, was suddenly seized with an attack of vomiting fourteen months ago. Since that time he has been subject to similar attacks about three times a week. About two months after the onset of the vomiting he began to suffer from intense paroxysms of headache, usually in the frontal region, and these have also continued up till now. During the pain he usually vomits, although he is frequently sick without headache. In July of this year he had a fit in which he turned completely round and fell on his back. He has had similar attacks repeatedly since. In these he usually turns to the right, although latterly he has fallen directly backwards. He began to complain at this time of pain in his left thigh and to have incontinence of urine, which is still present. He is now very drowsy. Six months ago his sight began to fail and has become gradually worse. His family and personal history are free from any suggestion. Now as he lies in bed all the movements of the arm can be fairly carried out, although there is some tremor in the left hand in bringing it to his face. Both grasps are weak, but there is no wasting or rigidity. Leg movements also, as he lies in bed, can be carried out but feebly; still there is no wasting or rigidity. He is able to sit up a little, although there is a tendency to fall backward. He is quite unable to stand, falling back at once on attempting to do so and saying he is giddy. There is no sensory impairment. His knee-jerks are present. His sight is much impaired, and there is well-marked optic neuritis, which is

[1] Since the above was written the optic neuritis has entirely disappeared.

progressing to atrophy. The other special senses are normal. The head, as you will observe, is large and square. He has incontinence of urine, and he passes his motions in the bed. For some days past he has behaved peculiarly, shouting out at imaginary people in the ward. He says they are talking loudly and that he feels he must shout. Of the diagnosis of intra-cranial tumour in this case there can be no reasonable doubt. There are headache, vomiting, optic neuritis, and also fits. There is no local paralysis such as was present in the preceding two cases, and nothing indeed to suggest that the tumour is in the hemispheres. The facts that he is unable to stand, that there is a tendency to fall backward with giddiness, together with the absence of localised paralysis, all point to the cerebellum as the locality of the growth. In what part of it it lies it would be difficult to say; all that one would venture to surmise is that it is almost certainly encroaching on the middle lobe. The presence of fits does not help us. They are not of the peculiar character associated with cortical disease, but rather of the nature of indefinite twitchings with marked cyanosis, characters usually present with tumour at the base or in the cerebellum.

I should now like to say a few words as to the general symptomatology of intra-cranial tumours. As you are no doubt aware, the trilogy of symptoms which are supposed to be absolutely pathognomonic of that affection is represented by headache, vomiting, and optic neuritis. If you have those three present the existence of a tumour is almost certain. The only condition I can imagine which might cause all of them and not be tumour is meningitis, usually tuberculous; but, the converse is by no means true, for you may undoubtedly have a cerebral tumour with not one of those three symptoms present. To this I shall again refer presently, but in the meantime let us consider for a moment the character of those three symptoms. The *headache* of intra-cranial tumour is not absolutely characteristic. It is, so far at least as our present knowledge goes, in no way localising—e.g., it is notorious that the headache in cerebellar tumour is very frequently frontal, sometimes occipital, often both. Its chief characteristic is that it is paroxysmal, and another distinguishing point is that it is frequently accompanied by vomiting without nausea. The local tenderness in the scalp which is sometimes present in cases of tumour is not to be confounded with the headache, and, whereas the former in many cases is significant, the latter is as yet without localising influence. The vomiting of optic neuritis may also be described as sudden and paroxysmal, as occurring without nausea, but as being frequently associated with headache. It is to be carefully regarded and treated, for a severe attack of vomiting is often the immediate precursor of death. The last of the three—optic neuritis—is the most important. Optic neuritis may be present, for example, in albuminuria and lead poisoning, and also, it is said, in anæmia without tumour; but in the great majority of cases there is no doubt that it is indicative of intra-cranial tumour. It also is not localising, although I believe that the optic neuritis of cerebellar tumour is in its characters frequently at least suggestive. There is no doubt that in many cases of cerebellar tumour the neuritis is particularly intense, being accompanied by numerous hæmorrhages and by the peculiar fan-like arrangement of glistening white spots radiating from the macula which is common in albuminuric retinitis. This form of neuritis I have seen much more frequently associated with cerebellar tumour than with any other variety, although, as I have said, it is not pathognomonic, only suggestive. So much for the general symptoms of tumour. I shall now briefly consider the symptoms associated with growth in different parts of the brain or cerebellum. Growths in or encroaching on the cortex are characterised more than others by localised pain on pressure over the scalp at the place corresponding to the underlying tumour. The more superficial the tumour the more marked is this symptom. Localised convulsion—i.e., convulsion starting in some particular segment of a limb—although not present in all cortical tumours, is also present only in a tumour in which the cortex is involved. This convulsion may be only slight twitching and nothing more; it may also be local cramp, which ceases before it has extended; but, on the other hand, it may begin as either of these and gradually go on to a convulsion which affects the whole body and abolishes consciousness. After such a fit there is usually local paralysis, most marked in the part in which the convulsion started. All these statements have been illustrated in the history of the first case I showed you to-day, in which the tumour was in the cortex itself. Tumour in the white matter of the cerebrum may have the general symptoms already referred to. Its special characteristic is a slowly increasing paralysis commencing in one limb. There may be no fits and little or no headache. If the growth encroaches on the posterior part of the internal capsule there may be anæsthesia and even hemianopia. The part of the body paralysed will of course depend upon the position of the tumour. It is in such tumours that not infrequently all the three usual symptoms of tumour—headache, vomiting, and optic neuritis—are absent, especially if the tumour is a slowly growing one. The distinctive symptom of tumours of the pons and medulla is the involvement of one or more of the cranial nerves, and it should be remembered that often marked evidences of paralysis may be present before any of the classical symptoms of tumour declare themselves. Especially is this true when the growth is an infiltrating one, and when, so to speak, the structures are slowly strangled and their functions gradually abolished. In such cases it is not uncommon to have little or no headache, and optic neuritis is probably as frequently absent as present. As regards the cerebellum, there are two distinct classes of tumour in regard to their symptoms—viz., those in which reeling is present and those in which it is not. In the former class the symptoms are, as a rule, though not invariably, much more severe and are believed to depend upon an involvement of the middle lobe. In the latter class of cases the symptoms may not be obtrusive. Occasionally headache and sickness, but nearly always optic neuritis, will be present, but often in such a way as not to excite suspicion, and this is a class of cases in which the diagnosis is apt to be missed. One point of interest, perhaps of importance, is the state of the knee-jerk in cerebellar cases. In some cases it is unusually brisk, chiefly in those, I believe, in which there are reeling and unsteadiness; in others it is absent, either constantly or at times, and always difficult to elicit. In two cases with such symptoms which I have examined post mortem the tumour was in the lateral lobe, not affecting the middle lobe at all. Smell also is not uncommonly abolished in cerebellar cases. Whether this is a result of the intra-cranial pressure on the olfactory lobes or whether it is due to a condition of these nerves analogous to that which abolishes the function of the optic nerves it is not easy to say. That it is due to any involvement of the actual centre is very unlikely.

The question of treatment of these various growths ma be briefly dismissed. Unless it is certain that the tumour is tuberculous, iodide of potassium will of course be given. I have known this drug to markedly influence the symptoms of a growth which afterwards proved to be malignant. In tuberculous tumours cod-liver oil and iron are indicated. A certain, if small, proportion of patients will probably recover, perhaps temporarily, even without drugs. The most marvellous case of recovery from cerebral tumour I have ever seen could not be ascribed to drugs, as the patient took none. The growth was probably tuberculous. Of course I have seen the symptoms disappear in numerous cases which presented unmistakable symptoms of tumour under the influence of iodide of potassium and mercury. The operative treatment of these growths is too large a question to discuss at this time. That it is clearly indicated and is, moreover, hopeful in certain cases must be evident from the case of the first patient I showed.

NEUROLOGICAL FRAGMENTS.

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No. V.

DR. RISIEN RUSSELL'S RESEARCHES ON THE KNEE-JERKS DURING ARTIFICIALLY INDUCED ASPHYXIA IN DOGS AND RABBITS.

IN a former paper, also entitled "Neurological Fragments,"[1] I have adverted to the loss of the knee-jerks in some cases of great supervenosity. I there refer to certain experiments made by Dr. Risien Russell on dogs and rabbits. He has now published his researches on Some Circumstances under which the Normal State of the Knee-jerk is altered.[2] In that paper

[1] THE LANCET, March 5th, 1892.
[2] Proceedings of the Royal Society, vol. liii.

Dr. Russell wrote on the effects of asphyxia (the same results being obtained by inspiration of pure nitrogen):[3] "The first effect which the altered conditions of the blood had on the knee-jerk [in dogs and rabbits] was to cause it to become exaggerated; this quickly became more and more marked until clonus at the knee was produced by a single tap on the patellar tendon, and when the exaggeration was at its maximum a tap on one tendon not only produced clonus on that side, but also evoked the knee-jerk on the opposite side, even to the extent of a few clonic jerks. After this stage was reached the knee-jerk became less and less marked, until it disappeared completely, and did not return up to the time of the death of the animal, when this was allowed to take place; but if, instead of allowing the animal to die, the obstruction to the entrance of air into the lungs was removed, so that the animal recovered either with or without the aid of artificial respiration, the knee-jerk reappeared. The time which elapsed before its reappearance depended on the length of time that the asphyxial state had been kept up; the shorter the duration of this state the quicker did the knee-jerk return, and *vice versâ*. On its return the knee-jerk did not at once present its normal characters; at first feeble, it quickly passed into a state of exaggeration, sometimes to the extent that a single tap on the patellar tendon evoked a few clonic jerks; after a variable period this exaltation subsided, and it returned to its normal condition."

It is well known that rapidly induced asphyxia in dogs and rabbits produces convulsion. In the paper referred to[4] I spoke of Dr. Russell's researches on this matter, as they bear on the hypothesis I hold that laryngismus stridulus in man (the infant human being) is a convulsion owing to discharges beginning in the (medulla) respiratory centre, those discharges being induced by supervenous blood. The following quotation from Dr. Russell's communication to the Royal Society deals both with the knee-jerks and with convulsions from asphyxia in a dog. "About two minutes after the trachea was clamped the stage of asphyxial convulsions was reached, and after the blood pressure had risen the knee-jerk became exaggerated. This exaggeration amounted to clonus in about thirty seconds later; but about one minute and a half later, and after the stage of asphyxial convulsions, the knee-jerk was abolished, while the blood pressure was still high, though showing signs of commencing to fall. Artificial respiration was commenced about a minute after this, and a minute and a half afterwards the knee-jerks returned, became exaggerated in about fifty seconds, and returned to their normal state about two minutes and a half later."

In a former paper[5] I suggested that the stage of exaltation of the knee-jerk in asphyxia was owing to loss of control of the lumbar centres from the effects of the supervenous blood in diminishing or annulling the functions of the cortex cerebri; but Dr. Russell found that "the same exaggeration of the knee-jerks was met with when asphyxia was induced in animals whose spinal cords were divided above the lumbar enlargement."

After some epileptic fits (Westphal, Gowers, Beevor) the knee-jerks are temporarily absent, from, as Dr. Gowers has suggested, exhaustion of the lumbar nuclei.[6] But here again the remarks just cited apply; the cord being divided, the loss of the knee-jerks in the third stage of asphyxia could not be owing to the effects of a discharge causing convulsion, the legs not being convulsed. Dr. Russell supposes that the loss of the knee-jerks after severe epileptic fits in man may be owing to asphyxia caused by the paroxysm. I have written to the same effect.[7]

"If supervenosity is a cause of loss of the knee-jerks, the fact may be important with regard to the apoplectic state, and possibly somewhat with regard also to post-epileptic coma. In some cases of apoplexy from cerebral hæmorrhage the knee-jerks are lost, in others not. It is worth while in all cases of apoplexy or coma to note the degree of supervenosity, and to investigate in regard to it the state of the patients as to tendon reactions and superficial reflexes."

Dr. Russell found that upon respiration with pure oxygen "in no case was the knee-jerk abolished, no matter how long the so-called apnœic state was kept up. Increased activity of the knee-jerk, gradually becoming more so until clonus developed, was the only effect of inhalation of this gas."

As I mentioned,[8] Dr. Russell finds that animals artificially asphyxiated recover after having had convulsions without artificial respiration being practised. I mention this again because it has been said that if the process of production of laryngismus stridulus (a respiratory convulsion in the human infant) was what I have suggested the patient could not recover.[10]

No. VI.

THE KNEE-JERKS IN TWO CASES OF OPIUM POISONING.

I have not recently had opportunities of making observations with regard to the state of the knee-jerks in many cases of great supervenosity. The following observations by Dr. Hawkes, formerly my house physician at the London Hospital, are worthy of report. One refers to the case of a boy aged six, who died from broncho-pneumonia. I merely allude to this case. On the morning of the day before death the patient's knee-jerks were present, in the evening of that day they were not obtained with certainty, and next morning (that of the day of death) they were not to be elicited. This case, however, is not of much value as to the influence of supervenosity, since the jerks were only absent on the day of death.

Dr. Hawkes has supplied me with notes of the case of a woman fifty years of age who was admitted on April 19th, 1893, at 6 P.M., unconscious and cyanosed, the knee-jerks being absent, after having taken laudanum—two ounces, it was supposed. (She was in the habit of taking laudanum for dysentery.) At 6.45 P.M. the pulse was 132 and stronger. The respiration was 4, expiration being very prolonged. The knee-jerks were absent. There was no corneal reflex, the pupils being the size of a pin's point. The knee-jerks remained absent, in spite of the administration of oxygen, until 11 P.M. and possibly longer. At 2 A.M. on April 20th consciousness was returning, and at 2.45 the patient answered questions. On recovery the knee-jerks were obtained. Of course I cannot be certain that the knee-jerks in this case were absent on account of supervenosity alone. For aught I know, opium itself in poisonous doses may abolish them. The knee-jerks were absent before the subcutaneous injection of a quarter of a grain of atropine at 6.45 P.M. on the 19th, and remained absent for hours, as stated.

Dr. Hawkes has given me notes of the case of a man aged fifty-four years who was admitted to hospital at 12.50 A.M. on Feb. 7th, 1893, after having taken one ounce of chlorodyne. The patient was not altogether comatose on admission. He resisted the introduction of the stomach tube; but later, at 1.15 P.M., he was quite comatose, and the faradaic current did not rouse him in the least. The patient recovered; his knee-jerks were present in all stages.

I make this note, thinking it desirable that the knees should be tested in cases of cyanosis from different causes. It is to be particularly borne in mind that, according to the researches of Dr. Russell, there is in asphyxiated dogs and rabbits exaggeration of the knee-jerks before loss of them, and that after the knee-jerks return they become exaggerated again before they become normal. In most cases of asphyxia from disease in man supervenosis will develop slowly and increase gradually; in artificially asphyxiated dogs it begins suddenly and attains its maximum rapidly.

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[3] In THE LANCET of March 5th, 1892, I referred to Dr. Frederic Hewitt's observations on anæsthesia for tooth extraction by pure nitrogen and by that gas with a small percentage of oxygen. In his recent work, Anæsthetics and their Administration, pp. 267 et seq., very interesting remarks are made on this matter. Among other things, he says: "An onlooker could not have detected any difference between the phenomena [produced by nitrogen] and those usually met with under nitrous oxide."

[4] THE LANCET, March 5th, 1892.

[5] THE LANCET, March 5th, 1892.

[6] The following are the conclusions of M. Bechterew (Neurologisches Centralblatt, 1892), as given by M. Keraval in the Archives de Neurologie, October, 1893, p. 321:—"*Études expérimentales chez le chien rendu épileptique par excitation électrique de l'ecorce.*—Voici ces conclusions: 1. Pendant la période tonique de l'accès d'épilepsie les réflexes patellaires peuvent ne pas être conservés, car les muscles sont tendus; généralement ils apparaissent dans la période clonique. 2. A la suite d'un fort accès d'épilepsie on observe d'ordinaire ou une totale disparition des réflexes ou une diminution plus ou moins considérable de ceux ci. 3. Cette disparition ou la diminution des réflexes a lieu d'habitude presque aussitôt ou quelques secondes après la cessation de la période clonique. 4. La complète disparition ces réflexes patellaires à la suite des accès d'épilepsie dure ordinairement quelques minutes, une à douze. 5. La normale des réflexes patellaires s'établit lentement et graduellement après l'accès; en quelques cas de disparition persistante des réflexes, le réflexe patellaire reprend sa force normale, seulement en une demi-heure. 6. En quelques cas le réflexe disparu, puis revenu après l'accès, acquiert temporairement une force plus grande qu'avant l'accès; puis, graduellement, il reprend sa force normale.

[7] Brit. Med. Jour., vol. i. 1892, p. 326.

[8] Dr. Buzzard: Medical Press and Circular, March 12th, 1890.

[9] THE LANCET, March 5th, 1892.

[10] THE LANCET, March 5th, 1892.

PNEUMONIA AFTER EXTERNAL VIOLENCE.

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THE relationship of acute pneumonia to its generally received causes has always excited much attention, and at no time more than the present, when it is undergoing active criticism, and some cherished beliefs are in danger of being swept aside in the light of recent bacteriological research and of losing that consideration to which they are justly entitled. It may not, therefore, be inopportune to refer to a question which has always had much interest for the readers of THE LANCET—viz., the occurrence of the disease after external injury. The discovery of certain micro-organisms in lungs affected with pneumonia places it, in the opinion of some, among the infective diseases. However that may be, this addition to our knowledge is a distinct advance towards the ultimate solution of its nature, and on all sides will be recognised the great importance of investigating the life-history of those organisms. But what is of greater value to us, bearing as it does upon causes that are probably more under our control, is the nature of the soil in which they grow and the conditions which favour or retard that growth. To this aspect of the question it is necessary to give special prominence. For instance, it is a fact well established by experiment that certain infective diseases cannot be transmitted to particular animals unless their organism is altered in some way. This may be done by subjecting the animal to certain conditions, artificial or other, and so setting up a state of body disposed to favour the growth and propagation of a micro-organism which produces that particular disease. This special predisposition, or, to adopt the phraseology of the text-books, the predisposing cause, plays an important part in the natural history of many infective diseases, and in none more than pneumonia. Though the influence is difficult to describe, and cannot be defined with scientific precision, it is none the less real, and we need only recall the effect of meteorological conditions, poisons of various kinds, and the existence of organic disease to indicate the extent and combination of action. Further investigation, perhaps, will afford a more definite and precise explanation than we have and will remove the question from the region of hypothesis. It is very desirable that it should be so, for it is not merely of theoretical interest; grave medico-legal issues may hinge on it, and it is not altogether unknown in our law courts.

The onset of pneumonia after external violence was observed and recorded some time before Litten[1] drew more particular attention to it by bringing forward a series of cases to which he gave the name of "contusion pneumonia." Of 320 cases of pneumonia admitted into Frerichs' wards in six years, 14, or 4·4 per cent., resulted from contusion—that is to say, developed after injury. Since then cases have been added by Demuth,[2] Bamberger,[3] Sturges,[4] and others, and the significance of the association has been recognised. In looking over the notes of a large number of cases of pneumonia I have seen during the last few years I have come across several that illustrate this connexion, and they are not, I would hope, unworthy of consideration.

CASE 1.—A man aged forty-seven years, was admitted into the Cardiff Union Hospital, under the care of Dr. Sheen, on June 23rd, 1889, suffering from pain in the left side. He had formerly been a soldier, serving in India, and latterly worked on a farm. On the 18th—five days before admission—while working on the top of a high hayrick he ventured too near the edge of it and slid down, his left side coming into violent contact with a cart standing below. This happened about six o'clock in the evening; he immediately left off working on account of the pain and returned home. He passed a restless night, and next morning at nine o'clock on attempting to go to work he was seized with severe shivering, which compelled him to desist. Before the accident his health was good, and he had not been drinking. The pain increased in the side, and on the day of his admission to hospital cough developed. I saw him first on the 24th. He was then in great distress, with severe pain in the left side below the nipple and constant cough. There was rusty sputum mixed with blood. The temperature was 101·4° F., the pulse 116, and the respiration 34. Great tenderness was present over the lower ribs on the left side, but no crepitus could be elicited. There was impaired note over the lower lobe of the left lung, with tubular breathing and fine crepitation. He was given salicylate of soda, but so much delirium followed that it was stopped on the second day, and on the 28th—four days after admission—an icebag was applied to the head, with great relief. On the 30th the temperature fell to 100°; the pulse was 92, and the respiration 32, the patient being altogether better. Pain was less in the side, and a more complete examination than had been possible hitherto was now made and revealed unusual mobility of the eighth and ninth ribs, with faint crepitus. Strapping was now applied. Over the lobe redux crepitations were beginning to be heard, and next day the temperature fell to normal. The patient now complained of discomfort in the mouth, and this went on to a severe attack of aphthæ, which affected the whole of the mouth, tongue, hard and soft palate, and pharynx by July 4th. Before this it was obvious that there was displacement of the eighth and ninth ribs from their cartilages on the left side. On the 6th the patient was worse, the temperature rising to 102°; by the 8th delirium had returned, the mouth and throat were red, glazed, and painful, the pulse was 118 and the respiration 40, while signs of implication of the lower lobe on the right side showed themselves. This increased, and he died on the morning of the 10th. The post-mortem examination showed separation of the eighth and ninth ribs on the left side from the cartilages; there was complete consolidation of the left lower lobe, which exhibited signs of red hepatisation on section. Over its posterior aspect there was recent soft adhesion, which was readily stripped, while on the anterior surface the visceral pleura underlying the two ribs at the point of separation was absolutely unimpaired, presenting a smooth, glistening appearance for two or three inches around. There was no evidence of bruising. The right lung showed early hepatisation in its lower lobe. In this case there is clear evidence, I think, that injury determined the onset of pneumonia. The patient had been in good health previously; there was an initial rigor fifteen hours after the blow, typical pneumonia developing in the left lung. The temperature fell on the tenth day, but a severe aphthous condition made its appearance, being followed a few days later by pneumonia of the opposite side. It is noteworthy that no signs of injury to the lung were found after death.

CASE 2.—A man fifty-two years of age was admitted to Cardiff Union Hospital on Feb. 28th, 1891. He stated that about a fortnight previous, while walking along a road in the dark, he stumbled and fell heavily, his right shoulder striking the ground with great force. For a few days he felt pain in the shoulders and right side, and shivered occasionally. The pain increasing, he was obliged in two or three days to take to his bed. A few days before admission to hospital the symptoms became worse and he began to spit blood. When seen on March 1st there was considerable dyspnœa, the respiration being 40 to the minute, as well as frequent cough and expectoration with a fair admixture of blood. The temperature was 102° F., the pulse being 100, of moderate volume and easily effaced by pressure. There was dulness over the right upper and middle lobes with tubular breathing, but no crepitation. On the left side there was impaired resonance over an area extending above the left nipple, and also tubular breathing and fine crepitation. Over this region he complained of severe pain. There were no signs of injury on the right side. On the 3rd the signs of consolidation were more marked in the left upper lobe, and the sputum consisted almost entirely of blood. Next day the area of heart dulness had extended, and cardiac failure, as shown by the pulse, and loud rhonchi and râles over both lungs were noted. The patient succumbed on the evening of the following day. At the necropsy a moderate amount of fluid was found in the pericardium and recent pericarditis, the surfaces of the membrane being covered with soft lymph. In the right lung there was uniform recent adhesion of the pleura over the upper and middle lobes, and below that the cavity contained a pint and a half of turbid serum. The upper and middle lobes and a narrow strip along the upper border of the lower lobe were consolidated, the upper

[1] Zeitschrift für Klinische Medicin. Band v.
[2] Münchener Medicinische Wochenschrift, Nos. 32 und 33, 1888.
[3] Wiener Medicinische Zeitung, Nos. 27 and 30, 1887.
[4] Brit. Med. Jour., vol. i. 1879, p. 310.

portion being paler, with the appearances of grey hepatisation. The base was œdematous and spongy. On the left side the upper lobe was in the stage of red hepatisation, the lower half being deeply congested and œdematous. The liver was large and full of blood, the kidneys being likewise congested. The spleen was enlarged and soft.

Careful inquiry into the history of this case failed to elicit any further material facts. The patient considered himself to be in good health before the fall, though on cross-examination he admitted that he was suffering from "a slight cold" which, he stated, did not prevent him working. This evidence is, of course, not absolutely trustworthy, as it is not uncommon for men suffering from well-marked pneumonia to continue at work, and instances have occurred where sudden death has taken place in the public streets, croupous pneumonia in an advanced stage being found on examination.

CASE 3.—A man sixty-six years of age was admitted to the Cardiff Union Hospital on Feb. 24th, 1892. The patient, a feeble old man, had suffered from right-sided hemiplegia for eight years and slight dyspnœa on exertion, but he was otherwise in fair health. On the evening of the 20th—four days before admission to hospital—he fell over a piece of hard snow, striking the left side on the edge of the pavement, and shaking himself considerably. Next morning he felt ill, shivered, and in the evening felt pain in the left side. On admission he was very ill, the temperature being 101·4° F., and the pulse small and irregular. The chest showed dulness over the lower lobe of the left lung, with tubular breathing and fine crepitation, and, in the axillary region, friction; over both bases rhonchi were to be heard; there was recent herpes on the upper lip; the heart sounds were feeble and indistinctly heard. The patient was very ill, having alarming attacks of heart failure, for which stimulants were freely given. By the 28th he had much improved, the pulse was stronger, and the rhonchi were not audible. Next day the temperature increased to 101°, the pulse to 103, and the respiration to 44. On March 2nd tubular breathing and fine crepitation were audible under the right breast; five days later, however, he had improved, the patch on the right side clearing up, though the signs at the left base persisted. On the 14th he was again prostrate and required free stimulation, and three days later an abscess formed in the ischio-rectal fossa. This discharged into an old sinus and the patient improved. By April 4th he had been up several days; dulness remained, however, at the left base and tubular breathing could be heard at certain points over it and crepitation at the lower part. The temperature had been normal for some time.

The evidence was not clear as to the previous state of health, and the rapid onset of illness—he almost immediately felt unwell—was not inconsistent with the view that the fall merely precipitated matters in a pneumonia that had already begun. The close proximity of supposed cause and effect is of great weight in estimating certain influences such as chill, but with injuries it involves an important fallacy to which allusion will be made later.

CASE 4.—A haulier thirty-eight years of age was admitted to the Cardiff Union Hospital on May 18th, 1892. At noon on the 11th, seven days before admission, he was standing in front of his horse, when the centre pole became loose and sprung forward, the end striking him on the left side of the chest over the lower ribs. He was knocked down, but he got up and went on with his work. At 7 P.M.—that is, seven hours later—he was seized with pain in the left side over the region where he was struck. He had a shivering fit and was sick; cough developed, and he took to bed. On the second day he stated that the sputum was almost pure blood and that there was great tenderness over the side. He was in good health at the time of the accident. On admission there was complete dulness over the left lower lobe in front; friction was to be heard, tubular breathing, and fine crepitation. Posteriorly over the same lobe the resonance was not so markedly impaired and the breathing was bronchial. There was much tenderness over the eighth rib in front, but no crepitus could be made out. On the following day the temperature fell to normal and the patient was convalescent. The dulness cleared up slowly and had not entirely disappeared when he was discharged from hospital at his own request on May 31st. During his stay the expectoration was small in amount and muco-purulent.

This was a case of croupous pneumonia coming on a few hours after a blow and terminating on the ninth day by crisis. The relation to the accident was very direct, and it was noteworthy that the physical signs were more marked over the seat of injury than posteriorly. The sputum at the beginning was said to contain much blood.

CASE 5.—A man thirty-eight years of age was admitted to the Cardiff Union Hospital on June 1st, 1892, complaining of injury to the right side. A little more than a week before, while digging in a gravel pit, a quantity of earth fell in, throwing him down and severely bruising the right side. He discontinued working and remained at home. On the fourth day pain in the side increased and he shivered, and from that time he had been confined to bed and had been very ill. According to his statement he was in excellent health until the accident, to which he attributed his illness. On admission he was suffering from severe pain in the right side, there being distress in breathing, and in the evening some delirium. Dulness was made out over the whole of the right side of the chest, excepting the apex; over the base, in front and behind, tubular breathing and fine crepitations were heard; at the apex the latter were likewise audible. The sputum was rusty, with a fair admixture of blood. For the next few days delirium was active, and the note at the right apex became quite dull. On June 5th signs of heart failure developed, with pulmonary œdema, and in spite of free stimulation the patient died on the following day. The necropsy showed complete consolidation of the right lung in the stage of red hepatisation; there was much lymph effused on the pleura, and at the base there were some recent adhesions. There were no marks of recent injury, and the ribs were intact.

The interval between the receipt of the injury and the onset of pneumonia was in this case three days, and the relation, I venture to think, does not admit of much doubt. The history, investigated as carefully as possible with regard to the previous health, was strong evidence that the illness dated from the accident.

These cases illustrate in all essential features the nature of the affection usually met with after injury, and it is apparent that we have to deal with genuine croupous pneumonia. The onset, course, and result are those of the classic disease. In tracing its relation to traumatic causes it is no easy matter to avoid being misled on occasions. Thus, in three of the cases above detailed (Cases 1, 3, and 4) the disease began within twelve hours after the injury was sustained. The connexion here seems to be so obvious that it would be generally accepted without further inquiry, the more so as it impresses itself forcibly on the mind of the patient or his friends; but, as Sturges[5] has pointed out, these are the cases where error is most liable to creep in and that require to be carefully sifted. An individual may be capable of doing his work and complaining of little beyond "a slight cold" until a fall or blow, or contusion of some sort, led up to, perhaps, by a passing feeling of illness, aggravates the condition by producing a measure of collapse, and we have all the appearances of sudden grave illness. An early examination may, indeed, reveal the advanced stage the inflammation has already attained, but physical signs not infrequently fail; and, further, it may be, the patient does not come under observation for some days. In the investigation of the history of an illness we are too often dependent for essential details upon the patient's memory, and with hospital patients this disadvantage is accentuated; still, with the exercise of some care the relation of certain events to each other may be determined with sufficient accuracy for practical purposes. These considerations were kept in view when the previous histories of cases of pneumonia suspected to be due to injury were gone into as minutely as possible. Taking now the three instances in which symptoms developed within twelve hours, two patients (Cases 1 and 4) asserted very confidently that they were in excellent health at the time of the accident; the third considered himself to be in fair health, but he was a weakly individual, who had been going about during very inclement weather, and the almost immediate onset of pneumonia (he felt cold and shivery from the first) suggested that it might have been "discovered" rather than caused by the accident. The history of the second case was more obscure, as some days intervened between the fall and the apparent commencement of pulmonary inflammation. According to the testimony of friends he was ill from the time of the accident, though able to get about a little; it is possible, of course, that he might have been suffering from pneumonia during that time, and the sudden increase in the symptoms might coincide with

[5] THE LANCET, April 24th, 1886.

extension of the disease to the other lung. There was no ground to question the accuracy of the history of the fifth case, the man being quite clear as to his previous condition. The clinical course of these cases did not, as I have already stated, differ materially from the ordinary type of the disease. Litten[6] was inclined to regard a markedly hæmorrhagic character of the expectoration as being to some extent distinctive of pneumonia after injury, conceiving that a contused lung was more likely to colour its effused products with a large admixture of blood. In two of the cases cited above the sputum contained a large proportion of blood, but it could not be asserted that it was unusually great and more profuse than is met with in some cases of ordinary idiopathic pneumonia. In Litten's series the lower lobes were chiefly affected, and in two cases both sides were affected. The prognosis in uncomplicated cases he considered to be good. I can hardly accept this latter statement without some qualification, for I believe that the gravity was in each instance increased by a certain amount of shock imparted by the injury. Of the five cases I have detailed three patients died; one from extension of disease to the opposite side after the vital powers had been further reduced by severe aphthæ, and the second from pericarditis and implication of the other lung. This instance occurred when influenza was prevalent throughout the district, and it would be difficult to leave this out of consideration. The third death was in a man addicted to alcohol, whose entire right lung was involved. In these patients the depression of the vital powers was severe, and the inflammatory process was intense and widespread; and the impression derived from this observation was that shock induced by accident added in no small degree to the severity of the affection and in some measure contributed to the fatal result.

The question of local injury to the lung forming the starting point of croupous pneumonia receives little support now, doubtless largely due to alteration in current opinion concerning the nature of that disease. Traumatic inflammation is, as Fagge[7] points out, chronic and interstitial or acute and caseous, but not hepatisation. Litten in his paper speaks of traumatic pneumonia occurring in patches—pneumonia migrans—as a result of tearing of the pulmonary tissue from contusion. He describes two cases resulting from severe injury to the chest, one terminating by crisis after the fifth day, the other fatally on the twelfth day. It is, however, doubtful whether any laceration took place. In Case 1 the nature of the injury pointed to a degree of violence such as would be likely to cause contusion or tearing of the lung, yet nothing was found after death to indicate that such occurred, and it was significant that the area of lung immediately underlying the severed costal cartilages was quite uninjured, the pleura even preserving its glistening surface for some inches around. On the other hand, patchy pneumonia was observed in Case 3, and it could not be said that the fall was sufficient to induce contusion of the lung, though shock led to some general collapse. Any attempt to define the exact influence of traumatic agencies in the causation of pneumonia is met by the difficulties incidental to such questions, and further by the circumstance that opinion differs regarding the nature of the disease itself. In the discussion that has waged around the pathology of pneumonia the chief views may be represented by the following: (1) that pneumonia is an acute inflammation of the lung, the pyrexia and other symptoms being secondary; and (2) that it is a specific fever, the lung change being merely a local expression of the general disease. It would be out of place here to discuss these views; it may be stated, however, that in recent years the first has been largely abandoned as untenable in the light of additional facts concerning the etiology; the second, advanced many years ago and supported at a later period by Austin Flint, who proposed the term "pneumonic fever," has been strengthened and modified somewhat by evidence from bacteriology. In 1882 Friedländer described a bacillus which he had found in pneumonia. Three years later Fraenkel reported the isolation of another microbe which he considered as the cause. To this he gave the name "diplococcus pneumoniæ." Weichselbaum confirmed these results of Fraenkel, and the coccus is now looked upon as playing an important part in etiology. The evidence pointing that way rests upon the extraordinary frequency with which the diplococcus is found in this disease in all ages and places. Where hepatisation is prominent the germs are in abundance, while in advanced stages their numbers decrease. In pneumonia they are often found in almost pure culture both in the sputum and pulmonary alveoli; and, finally, they produce in dogs and sheep by strong culture, and in rabbits by weaker, a true fibrinous pneumonia. But Weichselbaum's researches went further and showed that, while the diplococcus was present in the vast majority of cases, in others (9 out of 129 cases) Friedländer's bacillus was found, and the streptococcus pyogenes was isolated in 21 cases in the same number, and the staphylococcus in 5. From these results it is obvious that any one microbe cannot be regarded as the sole cause of the disease, and, moreover, the frequency with which Fraenkel's diplococcus is met with in other inflammatory affections—e.g., pleurisy, meningitis, nephritis, &c.—makes it apparent that, so far as concerns its etiological relations, pneumonia differs in some respects from the specific fevers. Both agree in this that, under certain conditions, an individual is more liable to be attacked. It is perhaps going too far to say that these conditions, which generally go under the term "predisposing causes," are absolutely essential to the occurrence of the disease, but it is undeniable that they are frequently present and in such close proximity to the onset that they seem to be the sole cause. It would appear from investigations into its life-history that the diplococcus of pneumonia settles in the sputum and is to be found in the saliva, nasal mucus, and elsewhere. It is more frequently present, and in greater number, in those who have recently gone through an attack of pneumonia, thus explaining the greater tendency to recurrence in those who have already suffered from the disease. It is conjectured that infection is propagated from these sources in crowded rooms, &c., and if depressing influences coincide—that is, if a predisposing cause exists, "weakening," as Wilson Fox[8] says, "the resisting power of the constitution"—an outbreak occurs. Among such depressing influences must be reckoned injury to the chest. How it acts remains still a subject for speculation; its influence, though indefinite, cannot be disputed, and in this it resembles "chill and exposure," a term which is relative, denoting circumstances that vary with different individuals, situations, and epidemics. For instance, a recent exhaustive investigation into pneumonia in Moscow by Kolsky[9] brought out the fact that a combination of meteorological conditions—a temperature below normal, a high barometer, light, dry, cold, north winds, and slight atmospheric precipitation—favoured the development of the disease. But it is met with under nearly all atmospheric states, and it is highly probable that individuals vary in their reaction to such influences. Contusions affecting the chest are more prone to be followed by pneumonia, and this would suggest that the local impression is of some importance in lessening the resistance of the pulmonary tissue. Such an explanation is supported by experiments carried out with Fraenkel's diplococcus. In dogs and sheep, inoculation induced pneumonia only after a lesion of the lung had been already established, such as by intra-tracheal injections of tartrated antimony. Further, the well-known experiments made by Traube and recorded in physiological text-books went to show that pneumonia did not set in after section of the pneumogastric nerves if foreign matter was excluded from the air-passages. These facts indicate the importance of lesion of the lung tissue in man, and shed some light upon the occurrence of pneumonia after contusions, entrance of foreign bodies, and circulatory disturbances. But the question is capable of explanation upon a wider basis. The chest contains vital organs, and any external violence which affects them reacts more powerfully on the nervous system and produces that depression of the vital function known as "shock." Hence if there is to be a special name for these cases it might more accurately be "shock pneumonia." This would include instances where the pulmonary inflammation comes on after a general shaking, as in a railway collision, a case in point being tried some years ago at the Leeds Assizes.[10] It has been known, moreover, to occur after the shock of a strangulated hernia, and an interesting case is recorded by Sokolowski[11] which suggests that a traumatic cause may start the growth of the diplococcus elsewhere than in the lung. A boy fell from a height, injuring the head and shoulder, and afterwards complained of severe headache, especially about the right ear. He vomited several times, and on the next day delirium set

[6] Zeitschrift für Klinische Medic'n, Band v.

[7] Principles and Practice of Medicine, second edition, vol. ii., p. 142

[8] Diseases of the Lungs, p. 254.

[9] Zeitschrift für Klinische Medicin, Band xx., Heft iv. und v.

[10] THE LANCET, April 27th, 1878.

[11] Berliner Klinische Wochenschrift, No. 39, 1889

in, and he was removed to hospital, where meningitis was diagnosed. On the third day he was more sensible, and on the fourth day signs of pneumonia at the right apex were observed. The temperature became usual about the sixth day. Diplococci were found in the sputum, and, while the chest rapidly cleared up, the right mastoid process and upper part of the chest remained tender for some time.

It may be gathered from the cases reported above that, while the degree of external violence likely to be followed by pneumonia varies considerably, it does not differ from other predisposing causes. Severe injury to the chest may be sustained without any subsequent involvement of the lung, and, on the other hand, severe inflammation may be the consequence of a trifling fall or blow. This difference may, of course, be explained by assuming the co-existence of other depressing influences, for it is reasonable to suppose that where the conditions of "chill and exposure" are prominent slight contusions may produce grave consequences. The bearing of these circumstances upon the ultimate cause needs further elucidation, and it would serve no useful purpose to advance further into speculation. How far one may go in the light of recent facts is well expressed by Drs. Sturges and Coupland in summing up the views of the pathology of pneumonia. "Can it be that, given a particular conjunction of antecedents, or of what we call predisposing causes ..... this microbe, already suitably placed for invading the body by the respiratory tract, finds the condition suitable for its development and excites the inflammatory phenomena in the lung with which we are familiar?"[12]

The close analogy which exists between acute tonsillitis and pneumonia is of interest, as cases of the former are not unknown after injuries, whether local or affecting the body generally. Wilson Fox pointed out "a similar intensity of rigor and prostration, a similar sudden invasion of pyrexia, and a similar rapid decline of this before the local inflammation has shown any signs of abatement."[13] Further there is an equal difficulty in verifying a distinct cause. Some evidence of this is afforded by the circumstance that many cases of quinsy are classified as "rheumatic," a term not infrequently suggesting that little or nothing definite is known about the origin. The tonsillar affection prevails epidemically, like pneumonia, and is associated apparently with certain atmospheric states. Individuals are liable to suffer from it repeatedly, and it is known that any cause which produces depression of the general health predisposes to it. As with pneumonia, there have been shown to be in relation with it certain micro-organisms that are found about the tonsil, and, still continuing the similarity, more than one form has been isolated. The presence of streptococci and staphylococci has been reported, and these are met with in the mouth and throat under apparently normal conditions or like Fraenkel's diplococcus. The tonsil which has already gone through an attack is, like the lung, more susceptible to this peculiar inflammation, and eventually slight causes, such as indigestion, exposure to cold during the menstrual period, &c., suffice to bring it on. Among these may be included falls and injuries, for I have known quinsy to come on after a fall in an individual who had suffered from former attacks, and it has been observed that even trivial operations on the throat may induce it. The following is a case in point. A gentleman who had had right-sided tonsillitis a year previously had some granulations on the left half of the pharynx touched with the galvano-cautery. For the first two days he was in excellent health, with little or no pain, and able to swallow. On the third he shivered and had pain in the right tonsil, which went through a typical quinsy, the temperature falling and all pain disappearing quite suddenly, though it took several days for the local change to clear up. The cauterised part showed no sign of implication. I think that this example serves the purpose of demonstrating that a traumatic agent may play the part of a predisposing cause to an inflammatory affection having a specific character like tonsillitis, and throws some light upon the relation which exists between acute pneumonia and external violence.

Windsor-place, Cardiff.

[12] Pneumonia, second edition, p. 372.
[13] Loc. cit., p. 340.

THE Royal Hospital for Diseases of the Chest, City-road, E.C., has just received a donation of £500 from a lady who takes a keen interest in its work, but does not wish her name to be known.

THE RECENT PANDEMIC OF INFLUENZA: ITS PLACE OF ORIGIN AND MODE OF SPREAD.

BY FRANK CLEMOW, M.D. EDIN.

I.—THE PLACE OF ORIGIN.

AFTER an interval of comparative quiescence influenza has again become widely epidemic in Europe. Four years have now elapsed since the latest pandemic of this troublesome disorder began its course. During that period the disease has varied much in activity. Like a flickering fire it has at times almost died out, and at others has burst into flame, causing in each renewed outbreak an amount of sickness and death that will not readily be forgotten. But it has never quite disappeared, and the entire period of greater or less prevalence of influenza may therefore justly be termed, as a whole, the latest pandemic of the disease. The present moment seems not inopportune for recurring to the early history of the outbreak and for throwing such light as is possible upon this most obscure part of the subject.

The place of origin of the recent pandemic of influenza, while it has been the subject of numberless theories, has never yet been clearly determined. The term "Chinese influenza," by which the disease has frequently been known, appears to have little justification for its use beyond certain theories, interesting in themselves, but not supported by facts. The proposition that extensive floods occurring in China might have started an atmospheric wave of disease-producing material, which spread around the globe as the dust from the Java earthquakes is supposed to have spread, has not met with general acceptance. Further, there has been published, so far as I am aware, no positive evidence of the existence of influenza in China in the year 1889, and of its introduction thence into Russia. Mr. James Cantlie[1] of Hong Kong has published an interesting account of an outbreak of apparently true influenza in that island in November, 1888, but connecting links between this outbreak and the appearance of the disease in Siberia in the autumn of 1889 are wanting. The Desert of Gobi in the northern part of Mongolia has also been suggested as the cradle of the malady,[2] but the suggestion was advanced rather as a possible solution of a difficult problem than as a direct deduction from the facts of the outbreak, and the evidence since accumulated points to a region much further west as the place of origin of the epidemic. The term "Russian influenza," so freely applied to the plague by the nations of Western Europe, sufficiently indicated the immediate source of the epidemic so far as those countries were concerned and led many to believe that Russia was not only the immediate but also the original source of the disease. This belief would appear to be founded on facts and is fully supported by the evidence of Russian observers themselves. Some of that evidence I propose to bring forward here.

Unfortunately no general report upon the epidemic has been published by the Russian Government, and the sources of information upon the history of the outbreak in Russia are therefore limited to scattered articles in Russian medical papers, to various *brochures* and pamphlets, to the annual reports of the Medical Department of the Ministry of the Interior, and to a report upon the epidemic in the Russian army, issued at the end of 1891 by the Army Medical Department in St. Petersburg. This most valuable report is founded upon a mass of documents no less than 11,000 in number, mostly obtained in the form of replies to a telegraphic circular which was sent in November, 1889, to every army medical inspector in the country. A similar circular was issued and widely distributed to medical men throughout Russia by the Russian National Health Society at about the same period. A large number of replies were received, but these have not yet been published or even tabulated.[3] They

[1] Brit. Med. Jour., Aug. 29th, 1891. Influenza is stated by more than one authority to be endemic in China, and the Hong Kong outbreak was possibly a localised epidemic of the disease, such, as I shall show later, occurs frequently in Russia without starting a widespread pandemic.

[2] "Epidemic Influenza: Notes on its Origin and Method of Spread," by Richard Sisley, M.D. London, 1891, p. 13.

[3] Dr. Lipski, who, with the late Professor Janson, was joint author of the circular, hopes ere long to publish the results of this collective investigation.

extension of the disease to the other lung. There was no ground to question the accuracy of the history of the fifth case, the man being quite clear as to his previous condition. The clinical course of these cases did not, as I have already stated, differ materially from the ordinary type of the disease. Litten[6] was inclined to regard a markedly hæmorrhagic character of the expectoration as being to some extent distinctive of pneumonia after injury, conceiving that a contused lung was more likely to colour its effused products with a large admixture of blood. In two of the cases cited above the sputum contained a large proportion of blood, but it could not be asserted that it was unusually great and more profuse than is met with in some cases of ordinary idiopathic pneumonia. In Litten's series the lower lobes were chiefly affected, and in two cases both sides were affected. The prognosis in uncomplicated cases he considered to be good. I can hardly accept this latter statement without some qualification, for I believe that the gravity was in each instance increased by a certain amount of shock imparted by the injury. Of the five cases I have detailed three patients died; one from extension of disease to the opposite side after the vital powers had been further reduced by severe aphthæ, and the second from pericarditis and implication of the other lung. This instance occurred when influenza was prevalent throughout the district, and it would be difficult to leave this out of consideration. The third death was in a man addicted to alcohol, whose entire right lung was involved. In these patients the depression of the vital powers was severe, and the inflammatory process was intense and widespread; and the impression derived from this observation was that shock induced by accident added in no small degree to the severity of the affection and in some measure contributed to the fatal result.

The question of local injury to the lung forming the starting point of croupous pneumonia receives little support now, doubtless largely due to alteration in current opinion concerning the nature of that disease. Traumatic inflammation is, as Fagge[7] points out, chronic and interstitial or acute and caseous, but not hepatisation. Litten in his paper speaks of traumatic pneumonia occurring in patches—pneumonia migrans—as a result of tearing of the pulmonary tissue from contusion. He describes two cases resulting from severe injury to the chest, one terminating by crisis after the fifth day, the other fatally on the twelfth day. It is, however, doubtful whether any laceration took place. In these I the nature of the injury pointed to a degree of violence such as would be likely to cause contusion or tearing of the lung, yet nothing was found after death to indicate that such occurred, and it was significant that the area of lung immediately underlying the severed costal cartilages was quite uninjured, the pleura even preserving its glistening surface for some inches around. On the other hand, patchy pneumonia was observed in Case 3, and it could not be said that the fall was sufficient to induce contusion of the lung, though shock led to some general collapse. Any attempt to define the exact influence of traumatic agencies in the causation of pneumonia is met by the difficulties incidental to such questions, and further by the circumstance that opinion differs regarding the nature of the disease itself. In the discussion that has waged around the pathology of pneumonia the chief views may be represented by the following: (1) that pneumonia is an acute inflammation of the lung, the pyrexia and other symptoms being secondary; and (2) that it is a specific fever, the lung change being merely a local expression of the general disease. It would be out of place here to discuss these views; it may be stated, however, that in recent years the first has been largely abandoned as untenable in the light of additional facts concerning the etiology; the second, advanced many years ago and supported at a later period by Austin Flint, who proposed the term "pneumonic fever," has been strengthened and modified somewhat by evidence from bacteriology. In 1882 Friedländer described a bacillus which he had found in pneumonia. Three years later Fraenkel reported the isolation of another microbe which he considered as the cause. To this he gave the name "diplococcus pneumoniæ." Weichselbaum confirmed these results of Fraenkel, and the coccus is now looked upon as playing an important part in etiology. The evidence pointing that way rests upon the extraordinary frequency with which the diplococcus is found in this disease in all ages and places. Where hepatisation is prominent the germs are in abundance, while in advanced stages their numbers decrease. In pneumonia they are often found in almost pure culture both in the sputum and pulmonary alveoli; and, finally, they produce in dogs and sheep by strong culture, and in rabbits by weaker, a true fibrinous pneumonia. But Weichselbaum's researches went further and showed that, while the diplococcus was present in the vast majority of cases, in others (9 out of 129 cases) Friedländer's bacillus was found, and the streptococcus pyogenes was isolated in 21 cases in the same number, and the staphylococcus in 5. From these results it is obvious that any one microbe cannot be regarded as the sole cause of the disease, and, moreover, the frequency with which Fraenkel's diplococcus is met with in other inflammatory affections—e.g., pleurisy, meningitis, nephritis, &c.—makes it apparent that, so far as concerns its etiological relations, pneumonia differs in some respects from the specific fevers. Both agree in this that, under certain conditions, an individual is more liable to be attacked. It is perhaps going too far to say that these conditions, which generally go under the term "predisposing causes," are absolutely essential to the occurrence of the disease, but it is undeniable that they are frequently present and in such close proximity to the onset that they seem to be the sole cause. It would appear from investigations into its life-history that the diplococcus of pneumonia settles in the sputum and is to be found in the saliva, nasal mucus, and elsewhere. It is more frequently present, and in greater number, in those who have recently gone through an attack of pneumonia, thus explaining the greater tendency to recurrence in those who have already suffered from the disease. It is conjectured that infection is propagated from these sources in crowded rooms, &c., and if depressing influences coincide—that is, if a predisposing cause exists, "weakening," as Wilson Fox[8] says, "the resisting power of the constitution"—an outbreak occurs. Among such depressing influences must be reckoned injury to the chest. How it acts remains still a subject for speculation; its influence, though indefinite, cannot be disputed, and in this it resembles "chill and exposure," a term which is relative, denoting circumstances that vary with different individuals, situations, and epidemics. For instance, a recent exhaustive investigation into pneumonia in Moscow by Kolsky[9] brought out the fact that a combination of meteorological conditions—a temperature below normal, a high barometer, light, dry, cold, north winds, and slight atmospheric precipitation—favoured the development of the disease. But it is met with under nearly all atmospheric states, and it is highly probable that individuals vary in their reaction to such influences. Contusions affecting the chest are more prone to be followed by pneumonia, and this would suggest that the local impression is of some importance in lessening the resistance of the pulmonary tissue. Such an explanation is supported by experiments carried out with Fraenkel's diplococcus. In dogs and sheep, inoculation induced pneumonia only after a lesion of the lung had been already established, such as by intra-tracheal injections of tartrated antimony. Further, the well-known experiments made by Traube and recorded in physiological text-books went to show that pneumonia did not set in after section of the pneumogastric nerves if foreign matter was excluded from the air-passages. These facts indicate the importance of lesion of the lung tissue in man, and shed some light upon the occurrence of pneumonia after contusions, entrance of foreign bodies, and circulatory disturbances. But the question is capable of explanation upon a wider basis. The chest contains vital organs, and any external violence which affects them reacts more powerfully on the nervous system and produces that depression of the vital function known as "shock." Hence if there is to be a special name for these cases it might more accurately be "shock pneumonia." This would include instances where the pulmonary inflammation comes on after a general shaking, as in a railway collision, a case in point being tried some years ago at the Leeds Assizes.[10] It has been known, moreover, to occur after the shock of a strangulated hernia, and an interesting case is recorded by Sokolowski[11] which suggests that a traumatic cause may start the growth of the diplococcus elsewhere than in the lung. A boy fell from a height, injuring the head and shoulder, and afterwards complained of severe headache, especially about the right ear. He vomited several times, and on the next day delirium set

[6] Zeitschrift für Klinische Medic'n, Band v.

[7] Principles and Practice of Medicine, second edition, vol. ii., p. 142

[8] Diseases of the Lungs, p. 264.

[9] Zeitschrift für Klinische Medicin, Band xx., Heft iv. und v.

[10] THE LANCET, April 27th, 1878.

[11] Berliner Klinische Wochenschrift, No. 39, 1889

in, and he was removed to hospital, where meningitis was diagnosed. On the third day he was more sensible, and on the fourth day signs of pneumonia at the right apex were observed. The temperature became usual about the sixth day. Diplococci were found in the sputum, and, while the chest rapidly cleared up, the right mastoid process and upper part of the chest remained tender for some time.

It may be gathered from the cases reported above that, while the degree of external violence likely to be followed by pneumonia varies considerably, it does not differ from other predisposing causes. Severe injury to the chest may be sustained without any subsequent involvement of the lung, and, on the other hand, severe inflammation may be the consequence of a trifling fall or blow. This difference may, of course, be explained by assuming the co-existence of other depressing influences, for it is reasonable to suppose that where the conditions of "chill and exposure" are prominent slight contusions may produce grave consequences. The bearing of these circumstances upon the ultimate cause needs further elucidation, and it would serve no useful purpose to advance further into speculation. How far one may go in the light of recent facts is well expressed by Drs. Sturges and Coupland in summing up the views of the pathology of pneumonia. "Can it be that, given a particular conjunction of antecedents, or of what we call predisposing causes ..... this microbe, already suitably placed for invading the body by the respiratory tract, finds the condition suitable for its development and excites the inflammatory phenomena in the lung with which we are familiar?"[12]

The close analogy which exists between acute tonsillitis and pneumonia is of interest, as cases of the former are not unknown after injuries, whether local or affecting the body generally. Wilson Fox pointed out "a similar intensity of rigor and prostration, a similar sudden invasion of pyrexia, and a similar rapid decline of this before the local inflammation has shown any signs of abatement."[13] Further there is an equal difficulty in verifying a distinct cause. Some evidence of this is afforded by the circumstance that many cases of quinsy are classified as "rheumatic," a term not infrequently suggesting that little or nothing definite is known about the origin. The tonsillar affection prevails epidemically, like pneumonia, and is associated apparently with certain atmospheric states. Individuals are liable to suffer from it repeatedly, and it is known that any cause which produces depression of the general health predisposes to it. As with pneumonia, there have been shown to be in relation with it certain micro-organisms that are found about the tonsil, and, still continuing the similarity, more than one form has been isolated. The presence of streptococci and staphylococci has been reported, and these are met with in the mouth and throat under apparently normal conditions or like Fraenkel's diplococcus. The tonsil which has already gone through an attack is, like the lung, more susceptible to this peculiar inflammation, and eventually slight causes, such as indigestion, exposure to cold during the menstrual period, &c., suffice to bring it on. Among these may be included falls and injuries, for I have known quinsy to come on after a fall in an individual who had suffered from former attacks, and it has been observed that even trivial operations on the throat may induce it. The following is a case in point. A gentleman who had had right-sided tonsillitis a year previously had some granulations on the left half of the pharynx touched with the galvano-cautery. For the first two days he was in excellent health, with little or no pain, and able to swallow. On the third he shivered and had pain in the right tonsil, which went through a typical quinsy, the temperature falling and all pain disappearing quite suddenly, though it took several days for the local change to clear up. The cauterised part showed no sign of implication. I think that this example serves the purpose of demonstrating that a traumatic agent may play the part of a predisposing cause to an inflammatory affection having a specific character like tonsillitis, and throws some light upon the relation which exists between acute pneumonia and external violence.

Windsor-place, Cardiff.

[12] Pneumonia, second edition, p. 372.
[13] Loc. cit., p. 340.

THE Royal Hospital for Diseases of the Chest, City-road, E.C., has just received a donation of £500 from a lady who takes a keen interest in its work, but does not wish her name to be known.

THE RECENT PANDEMIC OF INFLUENZA: ITS PLACE OF ORIGIN AND MODE OF SPREAD.

BY FRANK CLEMOW, M.D. EDIN.

I.—THE PLACE OF ORIGIN.

AFTER an interval of comparative quiescence influenza has again become widely epidemic in Europe. Four years have now elapsed since the latest pandemic of this troublesome disorder began its course. During that period the disease has varied much in activity. Like a flickering fire it has at times almost died out, and at others has burst into flame, causing in each renewed outbreak an amount of sickness and death that will not readily be forgotten. But it has never quite disappeared, and the entire period of greater or less prevalence of influenza may therefore justly be termed, as a whole, the latest pandemic of the disease. The present moment seems not inopportune for recurring to the early history of the outbreak and for throwing such light as is possible upon this most obscure part of the subject.

The place of origin of the recent pandemic of influenza, while it has been the subject of numberless theories, has never yet been clearly determined. The term "Chinese influenza," by which the disease has frequently been known, appears to have little justification for its use beyond certain theories, interesting in themselves, but not supported by facts. The proposition that extensive floods occurring in China might have started an atmospheric wave of disease-producing material, which spread around the globe as the dust from the Java earthquakes is supposed to have spread, has not met with general acceptance. Further, there has been published, so far as I am aware, no positive evidence of the existence of influenza in China in the year 1889, and of its introduction thence into Russia. Mr. James Cantlie[1] of Hong Kong has published an interesting account of an outbreak of apparently true influenza in that island in November, 1888, but connecting links between this outbreak and the appearance of the disease in Siberia in the autumn of 1889 are wanting. The Desert of Gobi in the northern part of Mongolia has also been suggested as the cradle of the malady,[2] but the suggestion was advanced rather as a possible solution of a difficult problem than as a direct deduction from the facts of the outbreak, and the evidence since accumulated points to a region much further west as the place of origin of the epidemic. The term "Russian influenza," so freely applied to the plague by the nations of Western Europe, sufficiently indicated the immediate source of the epidemic so far as those countries were concerned and led many to believe that Russia was not only the immediate but also the original source of the disease. This belief would appear to be founded on facts and is fully supported by the evidence of Russian observers themselves. Some of that evidence I propose to bring forward here.

Unfortunately no general report upon the epidemic has been published by the Russian Government, and the sources of information upon the history of the outbreak in Russia are therefore limited to scattered articles in Russian medical papers, to various *brochures* and pamphlets, to the annual reports of the Medical Department of the Ministry of the Interior, and to a report upon the epidemic in the Russian army, issued at the end of 1891 by the Army Medical Department in St. Petersburg. This most valuable report is founded upon a mass of documents no less than 11,000 in number, mostly obtained in the form of replies to a telegraphic circular which was sent in November, 1889, to every army medical inspector in the country. A similar circular was issued and widely distributed to medical men throughout Russia by the Russian National Health Society at about the same period. A large number of replies were received, but these have not yet been published or even tabulated.[3] They

[1] Brit. Med. Jour., Aug. 29th, 1891. Influenza is stated by more than one authority to be endemic in China, and the Hong Kong outbreak was possibly a localised epidemic of the disease, such, as I shall show later, occurs frequently in Russia without starting a widespread pandemic.
[2] "Epidemic Influenza: Notes on its Origin and Method of Spread," by Richard Sisley, M.D. London, 1891, p. 13.
[3] Dr. Lipski, who, with the late Professor Janson, was joint author of the circular, hopes ere long to publish the results of this collective investigation.

have, however, been used to some extent by the compilers of the army report.

Very early in the study of this material one fact stood out most prominently: influenza, or a disease so like it as to be practically indistinguishable from it, is endemic in Russia. This statement is based upon the following evidence. In the annual reports of the Medical Department—at least, since the year 1887 (I do not possess an earlier report)—"grippe" has formed a permanent heading in the list of "infectious, endemic, and parasitic diseases," of which details are given for every part of the country. The epidemic outbreak occurred in 1889, but in the years 1887 and 1888 there was not a government in Russia that did not furnish cases of grippe in one or other year (with the exception of those of Saratof, the Kuban and Uralsk), while the large majority of governments furnished cases in both years. The disease is especially prevalent in the governments lying on or near the Gulf of Finland, and not least so in the city of St. Petersburg itself. In the year 1888 alone there were recorded in Esthonia 34·1 cases of grippe per 10,000 inhabitants, in Livonia 27·4, in Courland 22·2, in St. Petersburg (government) 16·6, in the capital 30·6, and in Olonetz 18·4. In other parts of Russia the numbers were smaller, the ratio per 10,000 of the population reaching double figures only in the governments of Moscow (11·9), Tver (11·5) and Irkutsk (13·9), and in the town of Odessa (14·5). If further proof of the endemicity of influenza in Russia is needed it is to be found abundantly in the evidence of individual observers in various parts of the country. Thus in the reports of the St. Petersburg-Warsaw Railway Company for the years 1885-88 (inclusive) it is stated that every year 50 per cent. of all cases of infectious disease among those employed on this line are cases of grippe.[4] In Nijni-Novgorod grippe is recorded every year, especially occurring in the second decade of life. Dr. Demiankof states that in a certain cadet corps in that town, in the ten years 1876-85, 4·6 per cent. of all cases of illness were due to grippe.[5] In four free dispensaries in the same town, in the year 1888, 2·9 per cent. of cases of infectious disease were returned as grippe.[6] Similarly, with regard to Moscow, Dr. Schnaubert wrote in 1889: "Grippe is an old acquaintance in Moscow; it appears here yearly in the form of small epidemics, principally in the spring and autumn."[7] This last sentence is of interest, as there is evidence from other Russian towns that the endemic disease, occurring usually in the form of so-called "sporadic" cases, at times takes on an epidemic character, though these outbreaks remain quite localised and show no tendency to start a widespread epidemic such as that of 1889. In this connexion may be quoted the occurrence, in January, 1888, of an outbreak of influenza in the town of Orenburg, among the members of the Orenburg-Nepluef cadet corps[8]; and of a similar outbreak, "attacking whole families," in the town of Kortchef and in certain villages in the Kortchef *uyezd* of the Tver government in December, 1888, and January, 1889.[9] Many other similar instances of localised epidemic outbreaks might be quoted did space permit.[10]

The endemicity of this disease, whether it be identical with influenza or not,[11] being established, it becomes of the greatest importance to determine in what part of Russia it was prevalent during the year 1889, immediately preceding and obscuring the course of the "pandemic" outbreak in the autumn of that year. In the government of Moscow localised epidemics of grippe occurred in January, February, April, and June, 1889.[12] In September "there were several sporadic cases in Moscow itself. From the beginning of October they became more frequent, but did not number more than 3 or 4 cases a day. From the 18th they became much more frequent, and about this time from the scattered sporadic cases there were formed 'nests' where the infection was more concentrated than elsewhere."[13] In the Moscow garrison the first case of the "epidemic" is stated to have occurred on Oct. 18th.[14] In the government of Tchernigof influenza appeared in February, 1889, in the town of Borzna, and in the course of the month 286 cases were reported among the 10,000 inhabitants of this town. In March there were 142 cases, in April 40, in May 4, in June 40, in July 38, and in August 5.[15] In September and October the government was practically free from the disease[16]; and it was not until November and December that influenza was again epidemic in Tchernigof. In Nijni Novgorod it is stated that while influenza was present in the town in each month of the year 1889, there were three periods of greatest incidence: the first in March and April, the second in August, and the third (the "epidemic") in October and November. Between March and September (inclusive) there were 195 cases in the town."[17] The beginning of the "epidemic" is ascribed by some authorities to the beginning, by others to the middle, of October; it was at its worst in the early days of November, and disappeared at the end of that month. In Kazan single cases of influenza occurred in the early months of 1889. In August they began to increase in number, and in that month there were recorded 52 cases, in September 46, in October 100, in November 152, and in December 44, occurring among the officers, men, and labourers, with their wives and families, attached to the Artillery corps and to a powder factory in Kazan.[18] The beginning of the "epidemic" in Kazan is ascribed by Dr. Dokhman[19] to the end of October and by Dr. Godnef[20] to the middle and end of October, while in the garrison of Kazan the epidemic began in the middle of the month.[21] In Orenburg two cases of grippe occurred among the troops in August, one on the 7th and one on the 9th, but there were no further cases in the town until the beginning of November. In St. Petersburg twelve members of the police force sickened with influenza as early as September,[22] and these have been brought forward as the first cases of the "epidemic" in the capital; but there was no spread of the disease from these patients, and it was not until the end of October that influenza began to prevail in St. Petersburg. Dr. Lipski[23] gives Oct. 20th as the date of the earliest case, and there is other evidence[24] that the epidemic did not begin in the capital until nearly the end of the month.

May not in these facts lie the key to the hitherto unsolved problem of the rapid spread of influenza across Russia? May it not have happened in other places, as in St. Petersburg, that the beginning of the epidemic was dated by days and even weeks too soon, as cases of the endemic disease were recalled and considered as the first cases of the epidemic? In this way it becomes possible to account for the early date ascribed to the beginning of the epidemic in some places in the west of Russia, where the disease is said to have arisen simultaneously with the outbreak in Western Siberia. The only other alternative is to deny the origin of the 1889 epidemic in the last-named or any other particular region, and to suppose either that a new infection arose at the same time over widely distant parts of the country, or that the endemic disease suddenly assumed epidemic characters simultaneously in these different regions. The last supposition involves the conception of some general alteration in external conditions, sufficient to affect the character of an already existing disease in parts of the globe widely separated from each other. In other words, it revives our old acquaintance, the "epidemic constitution." But, apart from these considerations, there is conclusive evidence to show that the epidemic of 1889 did arise earlier in one part of Russia than in any other, and did spread in more or less definite directions from this centre; that the part in which it arose was in the West of Siberia and the

[4] Quoted by Dr. Volovski at a discussion at the Medical Society of St. Petersburg. Vratch, 1889, No. 48.

[5] Ruskaia Meditzina, 1890, p. 231. Article by Dr. Rodzevitch.

[6] Ibid.

[7] Meditzinskoe Obozrénie, 1890, vol. i., p. 109. In Moscow an increasing number of cases of grippe were recorded every year from 1886-89. In 1886 there were 133; in 1887, 182; in 1888, 327 cases. (Reports of the Moscow Town Council, Sanitary Department.)

[8] Dr. Karnitski, quoted in the Army Medical Report. There were in all forty nine cases; in the epidemic of November, 1889, seventy-four cases occurred in this corps. The cases in the earlier outbreak were much more severe than in the later.

[9] Reply of Dr. Rusin to the National Health Society.

[10] The outbreak in Bokhara in May, 1889, appears to have been exactly analogous to those quoted in the text.

[11] There is a consensus of opinion in St. Petersburg that the endemic disease is identical with the epidemic.

[12] Report of village dispensaries, in supplement to Report of Sanitary Council of the Moscow Government.

[13] Dr. Schnaubert, loc. cit.

[14] Army Medical Report.

[15] Reply of Dr. Sviatlovski to the National Health Society.

[16] Dr. Ulezko reported three cases in September. Zemski Vratch, 1890, No. 42.

[17] Report of Nijni-Novgorod Sanitary Commission for 1889. Ruskaia Meditzina, 1890, p. 268.

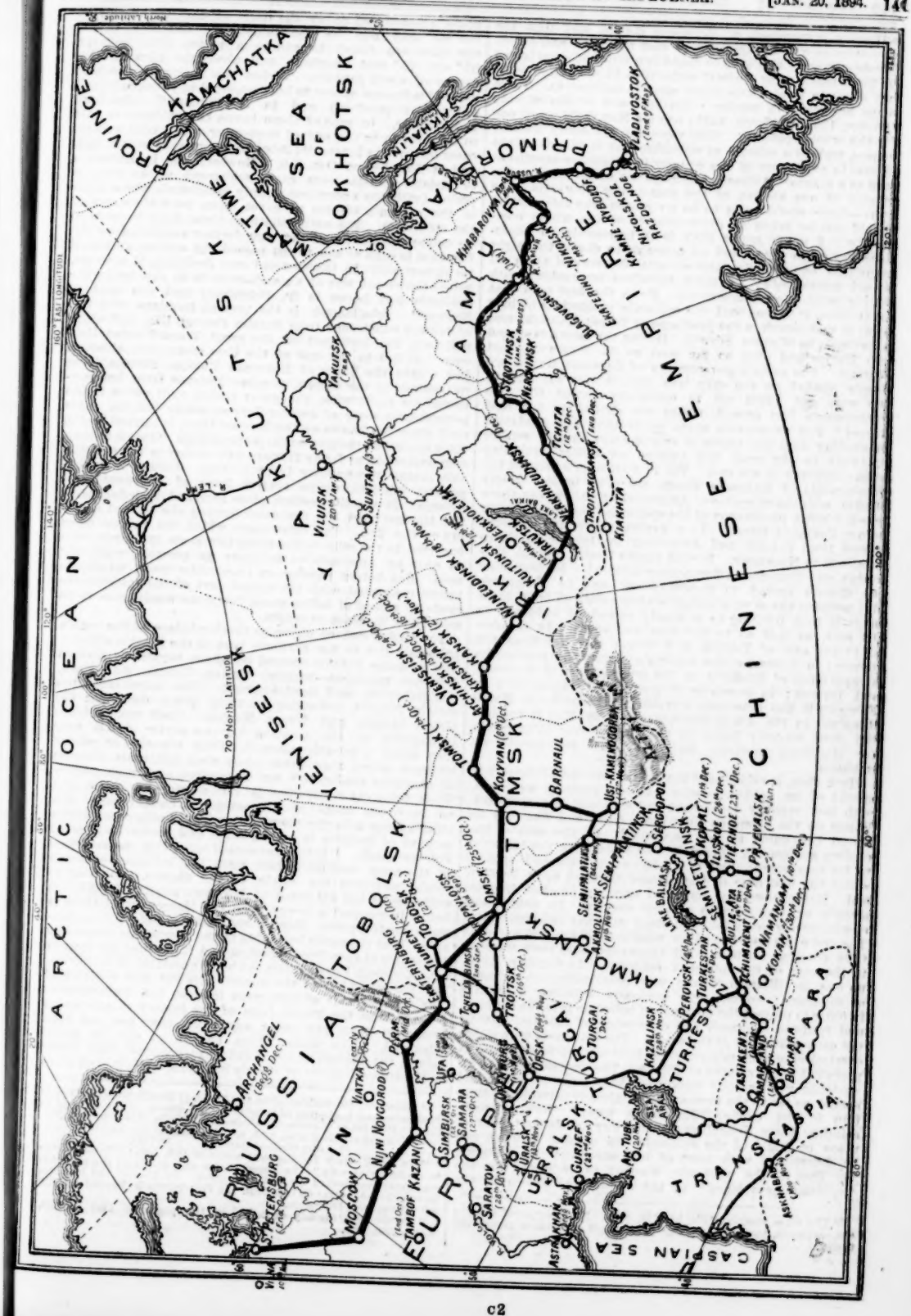
[18] Army Medical Report.

[19] Ibid. [20] Ibid. [21] Ibid.

[22] Ruskaia Meditzina, p. 727, 1889. Article by Dr. Hermann, senior physician to the Obukhovski Hospital, St. Petersburg.

[23] At a meeting of the National Health Society on Nov. 17th, 1889.

[24] In the various regiments of the St. Petersburg garrison the earliest cases were dated: Oct. 27th, Oct. 30th, Nov. 1st, "end of October" (many), and other dates about the same period.


ARCTIC OCEAN
RUSSIA IN EUROPE
SIBERIA
CHINESE EMPIRE
KAMCHATKA
SEA OF OKHOTSK
MARITIME PROVINCE
SAKHALIN
VLADIVOSTOK
PRIMORSKAIA
KHABAROVKA
AMUR RIVER
YAKUTSK
VILUISK
SUNTAR
VERKHOYANSK
OLEKMINSK
IRKUTSK
KIAKHTA
TROITSAKOVSK
TCHITA
STROTINSK
NERCHINSK
KRASNOYARSK
KANSK
ACHINSK
TOMSK
KOLYVAN
BARNAUL
OMSK
TOBOLSK
TYUMEN
PERM
ARCHANGEL
MOSCOW
NIJNI NOVGOROD
KAZAN
SIMBIRSK
SAMARA
SARATOV
ORENBURG
URALSK
GURIEF
ORSK
TROITSK
KUSTANAI
AKMOLINSK
PETROPAVLOVSK
SEMIPALATINSK
SEMIRETCHINSK
KOPPAL
LISKEE
VIERNOE
PRJEVALSK
SERGIOPOL
USTKAMENOGORSK
ALTAI
LAKE BALKASH
PEROVSK
TURKESTAN
CHIMKENT
OKHAN
NAMANGAN
TASHKENT
SAMARCAND
BOKHARA
KHIVA
KRASNOVODSK
ASKHABAD
CASPIAN SEA
TRANSCASPIA
70° North Latitude
60° East Longitude
100°
120°
140°
160°

adjoining government of European Russia, and that the directions in which it spread were east and west and south. The best proof of this is to be found in a series of maps issued by the Russian army medical authorities in connexion with, but separate from, their report already referred to. These maps are eight in number: one for each of the months October, 1889, to March, 1890; one for May, 1890; and one for the whole epidemic. They represent the entire Russian empire, and by a scheme of colouring the incidence of the disease in every part of the country in successive months is seen at a glance. Although the maps are constructed on the returns of one section of the community only—viz, the army—there would seem to be no reason why this section should not be taken as representative of the whole community. I much regret that it is impossible to reproduce the maps here,[25] and all attempts to digest the eight maps into one retaining the essential features of them all proved unsuccessful. I must therefore be content with stating what they demonstrate. From the first map, that for October, it is seen that the epidemic reached its highest point in that month in the provinces of Tomsk, Tobolsk, and Akmolinsk, in Western Siberia. During the month it spread into Europe and even so far west as St. Petersburg and Warsaw. The eastern governments of European Russia are deeply shaded on the map, the central less so, and in the west and south all is colourless except the two governments just named, which are shaded to the first degree. The subsequent maps prove that this gradation in shading does not imply a synchronous though weaker epidemic in the west, but implies an earlier beginning of the epidemic in the east. For in November's map all the governments of European Russia are more or less deeply shaded with the exception of Archangel; that is to say, there was a distinct progression of the epidemic from east to west across European Russia. In a southerly direction influenza passed from Tobolsk and Akmolinsk in October to Semipalatinsk in November. In that month Uralsk, Turgai, Turkestan, and Transcaspia first appear coloured. In December the disease spread to Semirétchinsk and to Ferghana. But perhaps the most striking evidence derived from these maps is that pointing to a steady spread of influenza to the east, as well as to the west and south. In October all to the east of Tobolsk and Tomsk was free from the disease; in November the epidemic began and reached its highest point of intensity in the governments of Yeniseisk and Irkutsk; in December it passed to Transbaikal; in February it was extremely prevalent in Yakutsk; in March it spread to the Amur province; and in May it reached the most easterly limits of the empire—the Primorskaia (or Maritime) province, and the penal settlements on Sakhalin.

Here, then, is evidence of the highest interest of the steady spread of an epidemic with extreme rapidity westward, with less rapidity southward, and with still less eastward. Where do the diverging lines start from, and can they be traced backwards to any one spot? In the case of the cholera epidemic it was possible to trace back the infection to its very source, and to fix the exact date and spot at which the first case of the disease occurred upon Russian soil. But cholera was imported across a frontier from an already existing *foyer* in another country. Its course was comparatively easily followed along railways and waterways. The first cases were looked for, were easily diagnosed, and were fully noted at the time. All these conditions were wanting in the case of the influenza epidemic. In October, 1889, no one in Western Siberia was anticipating an outbreak of influenza; no one was anxiously watching a frontier in order to prevent the entrance of infection into the country, and ready to telegraph the occurrence of the first case to the uttermost parts of the world. The first cases were either overlooked or were mistaken for intermittent fever, which is prevalent in the steppes of Russia. The very existence of an epidemic was scarcely recognised before the infection had spread so far to the west as to be already attracting attention in the capital 2000 miles away. But, notwithstanding these difficulties in the way of fixing the exact place of origin of the epidemic, its general position can be determined with more or less accuracy. In retracing the lines of the epidemic, whether as indicated by the "epidemic prevalence" of the disease (as shown in the maps referred to) or by the dates of the first cases, so far as they can be ascertained, in different towns, the lines are found to end in a region lying between 60° and 70° east longitude, and about the 55th or 56th degree of north latitude. Within this region the earliest cases of influenza appear to have occurred in Petropavlovsk[26] (Akmolinsk province) and in Tcheliabinsk[27] (Orenburg government). In each of these towns the epidemic is said to have begun in the end of September. The next earliest cases occurred in Tiumen[28] (Tobolsk government) on Oct. 2nd, and in Tomsk[29] on Oct. 7th. Nowhere else in European or Asiatic Russia were cases registered at so early a period (with the exceptions already mentioned, where cases of the endemic disease were set down as early cases of the epidemic). The authenticity of these dates appears to be unquestionable; and they are further supported by the fact that in each of the towns named the epidemic attained its highest point in October and was declining, if not over, before the month was at an end—that is to say, before the epidemic had begun in St. Petersburg and the west of Europe.[30] Tcheliabinsk is the present terminus of a line of railway which runs from Samara through Ufa, and which will form the first part of the great Trans-Siberian Railway. It lies to the east of the Ural mountains, although just within the limits of European Russia. Petropavlovsk lies entirely in the steppe, at some distance from, but connected by roads with, the great postal road which is the present main route of communication across Siberia. This road, generally known as the Moscow tract, is marked by the thick line across the map on the previous page. There is railway communication as far as Tiumen, but further to the east the sole means of travelling is by posting. Tiumen is an important junction where several lines of communication diverge. It was the earliest place attacked by influenza on the Moscow tract, the first cases (among the troops) occurring on Oct. 2nd. The dates upon which the earliest cases occurred in the other towns along this route are given, with as near an approach to accuracy as possible, upon the map. But before passing on to consider these, which are rather connected with the second part of the subject—the mode of spread of influenza—a few more words have to be said as to its place of origin.

The region defined above as the birthplace of the recent pandemic lies in the northern part of the Kirghiz steppes. The immense district covered by these steppes is divided into five provinces—namely, Uralsk, Turgai, Akmolinsk, Semipalatinsk, and Semirétchinsk. The inhabitants are mostly Kirghiz, belonging to three great divisions: the Great, Middle, and Lesser Hordes. Their mode of life is nomadic in the summer, but as winter draws near they select a suitable place for their *zimovka*, or winter quarters, where they either pitch their felt tents (*kibitki*) or construct *zemlianki*[31] for themselves and their cattle. Their principal occupation is the rearing of cattle, and an enormous trade in live stock is carried on. The chief market is in the town of Orenburg, but a considerable amount of business in cattle, hides, and leather is done at Petropavlovsk. It is to these nomad tribes that the compilers of the army medical report upon the influenza epidemic would attribute the origin of the disease. Of positive evidence of the existence of influenza among the Kirghiz before it occurred in towns upon the Moscow tract there is unfortunately none. Beyond the facts stated all is conjecture. That the cattle belonging to the Kirghiz are frequently the source of epizoötics, which spread far beyond the steppes into European Russia, there can be no question. If epizoötics, ask the compilers of the report, why not also epidemics? The suggestion is of very great interest and finds more to support it in the known facts of the history of the recent pandemic than any other suggestion that has yet been advanced. The places where, so far as can be ascertained, the earliest cases of influenza occurred were either in the steppe country or closely bordering upon it, and there

[25] The maps measure 20 in. by 12 in. each. Nine degrees of shading are employed, indicating various percentages of sickness among the troops.

[26] Answer of Dr. Bielilovski to the National Health Society ("end of September and beginning of October"); and answer of the surgeon to the 3rd Division of the Siberian Cossacks ("middle of September").

[27] Russkaia Meditzina, 1889, p. 663 (article by Dr. Zagorski).

[28] Army Medical Report. [29] Ibid.

[30] In Tcheliabinsk Dr. Zagorski wrote on Oct. 18th: "The epidemic is declining already." In Tomsk (town and province) the epidemic was quite over before the end of October. In Tiumen the last case among the troops was on Oct. 20th. In Petropavlovsk the epidemic did not die out until December.

[31] Earth huts, already described in the pages of THE LANCET, March 25th, 1893.

was a clear progression of the epidemic in different directions along lines which radiated from the steppes. Whether the Kirghiz themselves were the first to suffer from influenza in the autumn of 1889 will now probably never be known. "The epidemic and endemic diseases of the (Turgai) province are little investigated, as, owing to the small number of medical men, registration of the sick is almost entirely neglected. The nomads suffer more from marsh fever than from any other disease; the next most frequent groups of diseases are those of the skin and cellular tissues, and parasitic diseases; after these come diseases of the eye, obesity, syphilis and consumption."[52] The life led by the nomads in winter, particularly of those who bury themselves in the underground earth huts, must be profoundly conducive to disease if the laws of hygiene are not a fiction, and the punishment which is supposed to follow their infraction is not a dream of the Western imagination. In summer, on the other hand, the conditions of life are much better. The Kirghiz then live in cool, well-ventilated tents, which are frequently moved from one spot to another. The men are constantly in the saddle and live a sufficiently active open-air life. In winter there is but little fresh food to be obtained; sufficient store of food has to be laid up in the autumn to last the whole winter, and it largely takes the form of smoked horseflesh. In the summer there is abundance of fresh meat, particularly of mutton, and for drink there are inexhaustible supplies of koumyss and of tea, which are drunk in great quantities by the Kirghiz. The life of a Kirghiz nomad is devoted to his flocks and herds. "All his dreams, wishes, and interests are grouped about his cattle, as about the sole source of his material and moral well-being." The number of animals possessed by individuals varies greatly, but one who owns 200 sheep and a corresponding number of larger cattle is said to be fairly well-to-do. The camel also plays no small part in the domestic economy of the Kirghiz. It would be interesting to know whether any disease similar to influenza was prevalent among the flocks and herds of the steppes in the summer and autumn of 1889. But of this, as of influenza among the human inhabitants of the steppes, there is alike no evidence. The Kirghiz themselves, according to Dr. Yuretzki,[53] call influenza "gangei" and also Chinese fever. The last name might be held to point to China as the place of origin of the disease, but, apart from the absence of positive evidence, there are other considerations which negative the idea. The towns earliest affected by influenza are more than 1000 miles from the Chinese frontier. The province of Tomsk has a short strip of frontier occupied entirely by the Altai mountains, a formidable barrier to any epidemic disease. The provinces of Semipalatinsk and Semiréchinsk, which also border upon the Chinese empire, were not invaded by influenza until November and December respectively, or much later than the appearance of the disease in Petropavlovsk. Further, the epidemic spread from north to south in these provinces, and not from south to north as it must have done had it been imported from China.

St. Petersburg.

THE TREATMENT OF GUINEA-WORM.

BY JOHN RANDLE, M.B., C.M. EDIN.

THE result of the treatment of guinea-worm in West Africa shows that this parasite passes through only one cycle of its existence in the human subject—viz., that of maturity. After this period the animal seeks for further existence elsewhere for the purpose of discharging the young within its overloaded uterine cavity. It is then that the host becomes conscious of the existence of his guest. The bulk of evidence goes to show that the ova and miniature worm cannot develop in the human subject, except through some other intermediate host. There are considerable elasticity and strength in this animal, and the statement made by the late Professor Aitken could be borne out when quoting from Scott. He says that the "strength of the tissue of the Dracunculus is such that a loop of the parasite will suspend a weight of 11¾ oz., and it is elastic to a remarkable degree. In the position in which it is generally found—viz, from the lower third of the leg downward—it is either coiled or entwined between the fasciculi of muscles, tendons, and fasciæ. The following are amongst the various methods adopted for the cure of this disease. 1. Galvanism is said to free the worm, but what is required is extraction. 2. Assafœtida has not a specific action on this parasite, as is alleged; in fact, during twenty years' observation I have not seen the slightest good done by its internal or external administration; and, to my mind, a drug of this kind should be carefully confined to those classes of diseases for which it may be useful. 3. In India and in this country the worm is extracted by some natives by placing the affected part in a running stream or tossing it about in water. Such a method of cure is accidental. The pathology of the disease shows that there is a mechanical difficulty to be overcome, and more intelligent traction should be used than that which is exerted by a current on those parts of the animals that are exposed. 4. For the same reasons coaxing, sucking, or cupping the worm cannot be considered as efficient methods of treatment. 5. Alum powder has also been recommended by some in order to harden the worm and prevent its breaking. 6. The treatment which I have found to be of most value out here is by: (*a*) poultices made of linseed meal, or gari, and farina, or foofoo, made from the *manihot utilissima*, or bitter cassava, with carbolised oil (1 in 15); (*b*) constant daily traction; and (*c*) an unsparing use of Paget's knife. The carbolised poultices should be applied every two hours; this will tend to reduce the inflammation or attract the worm to the surface. The traction should be made by "playing" the worm. When the worm is quite tense it should be rolled up in a match stick or quill and the quill fastened on to the body by means of thread or adhesive plaster, or the proximal end of the worm should be tied with a string. Whilst making this traction, intermittent pressure should be exerted all round the vicinity of the worm (this will materially cause it to relax its hold); no fear should be entertained of the worm breaking, the ova spilling, or the young ones reinfecting the individual. What does occur if the worm should break is that the other end sets up irritation somewhere near, and suppuration sets in. This should at once be poulticed and laid bare by means of a Paget's knife, and the animal extracted from its next haunt. If this treatment is carried out actively, no case of guinea-worm should be under treatment for more than fourteen days. The treatment recommended in books is best expressed by Surgeon-General Sir W. Moore:—"Unless a little of the body of the worm can be wound round the feather-stem without the slightest force it will be better to remain satisfied with having secured the thin end of the worm." This is the reason for the protracted recovery which patients make whilst under treatment for this disease. Its duration may extend to many weeks and months. During my student days in the Government hospitals here I was often warned by surgeons not to break the worm. At first I did so accidentally and afterwards experimentally; the worm would burrow somewhere else, and suppuration would set in; the surgeon would then cut into the abscess and extract the worm, and the patient would recover. To my mind it is preferable to have this slight irritation and suppuration attended to actively than to see a disgusting parasite gnawing away for an indefinite period. What becomes of the ova or of the miniature worm, whether they are destroyed by the antiseptic oil or not, I do not know. One thing, however, is certain, that when the guinea-worm knows, so to speak, that someone has taken up arms against him he invariably deserts his habitation; in fact, Surgeon-General Sir W. Moore, in speaking of these symptoms, says: "I have frequently known the worm broken without any bad results, as above. It is not, as has been supposed, the discharge of young only which creates inflammation; it is when the parasite dies and acts as a foreign body that inflammation and abscess occur." Nature has in this wise pointed out the method of treatment that should be adopted, and if she were only followed by attracting the worm to the surface and reducing the inflammation by means of poultices, by constant daily traction on the worm, and by using a Paget's knife as soon as there is any sign of an abscess forming, the sufferings of patients would be materially diminished, and possibly many of them would be saved from the ravages of this disease.

Lagos, West Africa.

[52] Dr. Matzkévitch: The Kirghiz Steppes of the Turgai Province and the Cholera Epidemic of 1892. St Petersburg, 1893.

[53] Quoted in the Army Medical Report.

SUBNORMAL TEMPERATURES OF THE BLOOD.

BY TOM ROBINSON, M.D. BRUX., L.R.C.P. LOND., M.R.C.S. ENG.

THE introduction of the clinical thermometer has not been without its evil as well as its good effects. Those who are in the habit of mixing with the younger members of the profession must be impressed by the fact that they lean too much upon modern scientific instruments for assistance in diagnosis and as guides to treatment, and the clinical thermometer is pre-eminent amongst these "crutches." Its habitual use has caused a corresponding deterioration of the sense of touch, and now we seldom read or hear such terms as the "pungent heat" of pneumonia or the "dry, hot skin" of other maladies. This may be an advantage, because the sense of touch is not a scientific test, the appreciation of heat and cold varying with each organism. But can the thermometer be trusted? Of course in a well-made heat-estimator the mercury will not lie, nor will the markings deceive, but where a mistake is apt to be made is in not recognising the fact that there is no accurate standard for the temperature of the human blood. I will illustrate the remark by the recital of a case.

A woman aged thirty came under observation for ulcerating chilblains of the hands, feet, and pinnæ. She complained of "habitually cold feet." Often in summer her feet and legs were so cold that she could not go to sleep, whilst in winter she used a hot bottle in bed and wore sleeping-socks. She suffered acutely from neuralgic headaches, which were always induced after exposure to cold east winds, and especially if the air was damp. Her mucous membranes were often irritable and she was subject to paroxysmal catarrh of the nose, the secretion from which organ would sometimes saturate three pocket-handkerchiefs in an hour. Any exercise fatigued her and she often had "fidgets," and could truly say that when she was tired she ached from head to foot. Her emotions were singularly varied. At times she would cry at the least thing, such as a kind word or an angry one, a disappointment or a success, and she was quite sure that the colder she was the more emotional she became. Her nervous system was unstable—that is, she would start at any sound, was always timid, and acknowledged to an irritability which troubled her much. She was, as she expressed it, "always on edge." An examination did not reveal any pathological change in any part of the organism. Her pulse was 80, and the temperature in the mouth only registered 96° F. The result was taken several times, and as a practical fact it rose about two-tenths in the evening. There was nothing unusual in the habits of the patient. She lived the life of a country gentlewoman and ate fairly well, but did not like fat. During the autumn of 1892 she was seized suddenly with the symptoms of influenza—i.e., successive chills, frontal headache, backache, and pink eye. Her temperature was taken and only rose to 100°. This was not alarming, but if the fact was taken into consideration that the habitual temperature of her blood was only 96° there was an actual rise of four degrees, which in an individual with a temperature of 98·5° would have sent it up to 102·5°, giving a warning result.

Remarks.—In a case such as this it can easily be imagined that a serious error might have been made by any one who was not conversant with the whole of the thermometric facts. And does not the recognition of the subnormal temperature enable the practitioner to find the key to the cause of the neuralgias, the back-aches, and the thousand-and-one manifestations which come under the term "neurotic"? Is not also light obtained as regards treatment? It seems to be the very fundamental law of such cases that one should, by exercise, warm clothing, and good heat-producing food, raise the temperature of the blood, and for this reason phosphorus and cod-liver oil are found to be the best drugs. Age is not only a hindering process, but it is also a cooling one, so that no surprise need be felt when the "lean and slippered pantaloon" is found with cold hands and cold feet and an actual temperature of 95° or 96°. Nor is it to be wondered at when cases of pneumonia are met with in the aged where the thermometer does not rise to more than 100°.

The main object in writing this short paper has been to call attention to the importance of recognising that the supposition that the temperature of the human race, whether in summer or winter, is in all latitudes 98° to 99° is not justified. The temperature of such persons as labourers, sailors, or of anyone whose life is spent in the open air, will up to middle life seldom be found to be below 98°, whilst in large towns, where life is spent indoors, and where the consumption of food is scanty and fanciful, it is surprising to find how many there are whose temperature is as low as 96°. Whilst writing this paper on Dec. 11th at 9 A.M. I placed the thermometer in my own mouth, kept it there for five minutes, and was surprised to find that it had risen only to 96·4°, and, as a contrast, I saw about one hour afterwards a farmer from the country, and he had a temperature of 98·6°. It would be of great use and interest if anyone with a large number of men and women under observation would publish the daily result of readings of temperature in those who were free from illness during the year. Common sense would indicate that there would be a higher temperature during the summer than during the winter months, and that is what is actually observed, but the difference is not great. The young have also a good range of temperature, the natural fatness of their bodies, if in health, retaining the heat, as if to compensate for their inability to generate it by movement.

Prince's-street, Cavendish-square, W.

CLINICAL ANÆSTHETIC STATISTICS FOR SEPTEMBER, 1893: AFZULGUNJ HOSPITAL.[1]

BY SURGEON-LIEUTENANT-COLONEL E. LAWRIE,
RESIDENCY SURGEON, HYDERABAD, DECCAN.

THIS paper was read before the Deputy-Surgeon-General of the Secunderabad District, Surgeon-Colonel Sibthorpe, and the officers of the Army Medical Staff and Indian Medical Service, on Oct. 2nd last:—

1. Total number of cases of complete anæsthesia, 202.
2. Cases in which complete anæsthesia was not induced, on account of dyspnœa, 3.
3. Average time to produce full anæsthesia in 202 cases, 3 min. 26 sec.
4. Average amount of chloroform required to produce full anæsthesia, 2·95 drachms.
5. Average duration of operation, 13 min. 36 sec.
6. Average total amount of chloroform per operation, 3·77 drachms.
7. After-effects: Vomiting occurred in 28 cases, or 13·6 per cent.:—

	No.	No. who vomited.	No. who did not vomit.
Patients who took food within six hours before the administration of the anæsthetic.	88	16 or 18·1 % (12, bile; 4, food).	72 or 81·8 %
Patients who took food between six and twelve hours before the administration of the anæsthetic.	20	5 or 25 %. (4, bile; 1, food).	15 or 75 %
Patients who took food between twelve and twenty-four hours before the administration of the anæsthetic.	97	7 or 7·2 %. (6, bile; 1, food).	90 or 92·7 %
Total	205	28 or 13·6 %.	177 or 92·7 %.

8. Number of cases in which struggling occurred, 144 or 71·28 %.
   (*a*) Resistance, from fear, was the cause of struggling in 51 or 35·4 % of these cases.
   (*b*) Choking was the cause in 6 or 4·16 %[2].
   (*c*) Intoxication was the cause in 87 cases or 60·41 %.
9. The average duration of the struggling stage (*c*) was 1 min. 9 sec.

Careful notes were taken of the struggling stage in chloroformisation during August and September. I have found,

[1] Duncan and Flockhart's methylated chloroform was employed.

[2] A word of explanation is necessary regarding choking. I always make an entry in the notes that the patient is "choked" if the cap is put down over the face so suddenly as to cause struggling. This form of choking, I need hardly add, is never allowed to continue for an instant.

as is well known, that struggling under chloroform is produced by three principal causes: (1) by fright, leading to resistance; (2) by choking or asphyxia from over-concentration owing generally to the cap being held too close to the face at first, or afterwards when the chloroform is renewed; and (3) by intoxication. The latter constitutes the form of struggling which is commonly called the "struggling stage." The struggling of fright occurs at the commencement of the administration and does not as a rule produce irregularity of the respiration. This form of struggling terminates as the patient becomes unconscious, and is rarely followed by the customary stage of struggling which is due to intoxication. For example, during September there were twenty-five administrations in children. All but one of these children cried and screamed violently at first. In those that cried there was no subsequent struggling, but the one child that did not cry went through the usual struggling stage. The crying and screaming of children ensure regular respiration and regular in-take of the chloroform, and I never attempt to discourage it. The statistics for the last three years prove that not only is the in-take regular at first in children who scream and cry, but, as there is no subsequent struggling, the crying at the beginning conduces to regularity of inhalation and, therefore, to safety throughout the administration. For this reason the struggling of fright is not a source of danger. Undoubtedly fright causes acceleration of the pulse and of the respiration, and consequently a more rapid in-take and a more rapid conveyance of the chloroform to the nerve centres; but the effect of chloroform, if asphyxia and irregular breathing are avoided, is to soothe fright, and as there is no subsequent struggling the remainder of the inhalation is regular. The struggling of intoxication is more likely to lead to danger than that of fright, as the breathing is frequently irregular in this stage, and it occurs when the anæsthesia is nearing completion. But irregularity of the breathing can be very easily checked during the intoxication stage by removing the cap and giving the patient a breath or two of air; and it can therefore never furnish the chloroformist with an excuse for allowing the in-take to be irregular. The effect of giving the patient air at this stage is not to delay anæsthesia, as there is most probably a small amount of residual chloroform in the lungs, but to restore regularity of the breathing and to avert the possibility of risk. The struggling of choking or asphyxia, which is generally produced by the pungency, or, in other words, by insufficient dilution, of the vapour of chloroform, or by deprivation of air, is excessively dangerous and ought never to be allowed to take place. It leads to gasping or deep inspirations and is the most frequent cause of accidental overdosing. The antidote for simple overdosing is to cause oxygen to reach the respiratory centre, either by pulling forward the tongue so as to stimulate the respiratory movements or by artificial respiration. But when a patient is cyanosed and asphyxiated as well as overdosed everything is against him. It takes time, when every movement is precious, to oxygenate the blood; there is a quantity of residual chloroform in the pulmonary vesicles which the most vigorous artificial respiration may altogether fail to get rid of quickly enough to save the patient's life; and, lastly, it has always appeared to me that the respiratory centre, when it is asphyxiated, is peculiarly susceptible to, and difficult to rouse from, the narcosis of chloroform. If cyanosis is ever allowed to take place under chloroform, thus showing positively that the patient is accidentally asphyxiated, it is imperative on the chloroformist not only to remove the chloroform cap and give air, but not to dare to reapply it until all traces of cyanosis have entirely passed off. It is not a question of how much air the patient is to get: the point to bear in mind is that it will not be safe to continue the administration while any sign whatsoever of asphyxia remains.

The above remarks have reference to the clinical aspects of the various forms of struggling under chloroform. It is to be hoped that the analysis of the gases of the blood, which is at present being carried out by Dr. T. Oliver and Mr. F. C. Garrett[3] will clear up much that is still obscure in the physiology of these incidental and accidental phases of chloroform narcosis. There must be important differences in the gases of the blood in such widely diverse conditions as normal anæsthesia where the breathing is natural and regular, anæsthesia promoted with irregular respiration, simple overdosing with chloroform, and overdosing combined with asphyxia.

Hyderabad, Deccan, India.

[3] THE LANCET, Sept. 9th, 1893.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CHOREA; RHEUMATISM; MANY LARGE SUBCUTANEOUS NODULES; MITRAL REFLUX; GOOD RECOVERY.

BY EDWARD MACKEY, M.D., M.R.C.P. LOND.

A BOY aged nine years was admitted to the Royal Alexandra Hospital for Sick Children, Brighton, under the care of Mr. Morgan, on Sept. 1st, 1893, and was transferred to me on Sept. 8th. In July he had pain in the joints after "paddling" in the sea; on July 6th he could scarcely walk home from a school treat, and he had been more or less in pain since. His aunts suffer from rheumatism. He was thin and looked delicate, but was not markedly anæmic; he had choreic movements of the head, arm, and tongue. Respiration was irregular, but the lungs were normal, except for a few râles. The heart's apex was in the nipple line (fifth interspace); a loud systolic bruit was heard there and also at the scapular angle; the second sound was accentuated at the base. The special point was a remarkable development of large subcutaneous nodules, as shown—perhaps rather overdrawn—in the engraving, which is from a photograph kindly taken by Mr. Hillier. The

plate referring to a similar case published by Dr. Cheadle in THE LANCET of May 4th, 1889, is almost a facsimile of this boy's appearance. Between thirty and forty nodules were counted, including three on a scapula spine, two on its inner border, eight or ten on spinous processes, several on the iliac crests (some so hard as almost to resemble bony growths), and several on the condyles, on the extensor tendons, on the patella, and on the dorsum of the hands and feet. Mr. Morgan showed the case at a meeting of the Brighton Medico-Chirurgical Society, where it excited much interest as being unique in the experience of the members. Arsenic in from four to six minim doses was ordered, and iodide of potassium in two-grain doses thrice daily was added on Sept. 8th. The temperature never rose above 100° F.; the urine was moderately acid and contained urates, but was free from albumen. The boy was kept quiet in bed, on light food, continuing the above remedies with occasional intermissions, and progressed to recovery without any serious symptom. On Oct. 10th no bruit could be heard, and such nodules as had not disappeared were smaller. On Nov. 8th they were all gone, and he was discharged well and shown so at the Society on Dec. 7th. This good recovery leads me to record the case, inasmuch as the prognosis in

such conditions has generally been considered extremely serious. I am indebted to Mr. Morgan and to Mr. Lewis, house surgeon, for notes.

Brighton.

A CASE OF KOCHER'S RADICAL MODIFICATION OF THE ALEXANDER ALIQUIÉ OPERATION.

BY FRED. EDGE, M.D. LOND., F.R.C.S. ENG., M.R.C.P. LOND., B.SC.,

SURGEON TO THE WOLVERHAMPTON AND DISTRICT HOSPITAL FOR WOMEN.

IN the *Archiv für Gynækologie*, 1893, is an account by Lanz of Kocher's modification of this operation, with a report of successful cases. The modifications introduced by Kocher are the splitting up of the inguinal canal so as to isolate the round ligament with ease, the drawing upon the round ligaments in the directions of the anterior superior iliac spines, and their fixation upon the aponeuroses of the external oblique muscles whilst being drawn upon. Having a case of prolapse with retroflexion, which was unrelieved by mechanical or medicinal means, I performed Kocher's modified operation as follows (to save the valuable space of THE LANCET I shall limit my description to the operation and avoid details):—

Taking the left side first, an incision was made from just above and external to the pubic spine to about three quarters of an inch above and internal to the anterior superior iliac spine, running parallel to Poupart's ligament. The external inguinal ring was felt as a yielding space and seen to be filled with a plug of fatty areolar tissue. A director was passed into the inguinal canal and the anterior wall slit up with a scalpel. The round ligament lay exposed with the branch of the genito-crural nerve. The ligament was then picked up with forceps, divided distally, and separated up to the internal inguinal ring. Exactly the same steps were performed on the right side. The second assistant now passed a uterine sound and held the uterus forwards. The two ligaments were then drawn upon in the direction of the iliac spines until firm resistance was felt, and the peritoneum was pulled on each as a knuckle three-quarters of an inch long. These knuckles were separated and pushed back. The round ligaments were stitched upon the oblique aponeuroses with continuous silk sutures whilst the given tension was being maintained, and the inguinal canal was closed as after operation for radical cure of hernia. The skin was then sutured with silkworm gut sutures. What at once strikes the operator is the great possibility of hernia following the operation. Another impression is that the round ligaments are very easy to find and can now be treated in any way required, and a following thought is forced upon one that by methods which do not open the inguinal canal the round ligaments cannot possibly be isolated and drawn out to the necessary extent. As to the formation of hernia afterwards I cannot yet speak, but it appears to me that if the inguinal canal be stitched with care the danger should be much less than after abdominal section. What, however, more than any other element, is felt by the operator is that he is acting on one of the modern root-principles of surgery, in that he can see everything, and is not working in the dark or trusting in the varying conditions of the round ligaments and their attachments. The after-course of the case was as follows: The patient was perfectly comfortable from the first, and her temperature was never above 99° F. Although the left incision did not heal at once owing to two stitch abscesses, yet, five weeks after the operation, both incisions were quite soundly healed. The uterus was very elevated, the cervix being only just reachable by the finger per vaginam. I send the account simply to make known the method and to draw attention to its directness and simplicity. Of its value my case will be no test until a year or more has passed.

Wolverhampton.

CASE OF OVARIOTOMY DURING PREGNANCY; AXIAL-ROTATION CYST.

BY W. TRAVERS, M.D. DURH., F.R.C.S. ENG.,

PHYSICIAN TO THE CHELSEA HOSPITAL FOR WOMEN.

(*Reported by* E. J. MACLEAN, M.D., C.M. Edin., *Resident Medical Officer.*)

THE brief notes which are appended may be read with interest in connexion with Dr. Lewers' cases published in a recent number of THE LANCET.[1] The patient, aged twenty-nine, was admitted to the Chelsea Hospital for Women at 2 P.M. on Aug. 23rd, 1893, with the following history. She had been married for eight years and a half and had had six children, the youngest having been born eleven months previously. Six years previously she was found to have an abdominal tumour, which had somewhat obstructed her second confinement, but it did not affect her later ones. At some period during her third pregnancy she was advised by an obstetric physician at a London hospital to have labour brought on prematurely, with the view of the tumour being subsequently removed. This she declined, and the labour was a natural one. She stated that ten days prior to admission she was seized with intense pain in her abdomen, which had continued with more or less severity. Menstruation had not occurred for the past four months. The woman was evidently very ill. The abdomen was generally distended and extremely tender all over, so much so that palpation, to be of any value, was impossible. Vaginal examination showed the uterus to be considerably enlarged and pushed against the pubes; the os and cervix were soft; the fornices distended, evidently by fluid; a thrill was felt generally on percussion; the temperature was 102·4° F.; the pulse 120 and small. An ovarian tumour with, in every probability, a twisted pedicle was diagnosed, with an equal probability of existing pregnancy. At 6 P.M. the abdomen was opened. The colour of the presenting cyst confirmed the diagnosis. There was general peritonitis. The cyst was covered by recent, soft, and easily swept down adhesions. Eleven pints of dark sanguineous fluid were evacuated. The cyst was right-sided; the pedicle, which was very much thickened from œdema and extravasated blood, had to be secured as close to the uterus as possible—it had been twisted two full turns from left to right. An after-examination of the cyst showed that there had been extensive hæmorrhages into its wall, forming dark livid bosses of considerable size, due to venous congestion and obstructed venous return, and in places suggestive of commencing moist gangrene. The patient bore the operation well; her temperature at 10 P.M. was 99°, and she was fairly comfortable. In the forty-eight hours of the second and third day the thermometer twice recorded 102°; it did not again touch 99°, save in one instance on the tenth day, owing to some suppuration about a stitch. She was discharged well on the twenty-fourth day. She came to the hospital on Dec. 23rd complaining of some slight pain in her right iliac region, but was quite able to get about. Her pregnancy was progressing naturally.

CEREBRAL EMBOLISM OCCURRING IN A GIRL AGED NINE YEARS AND ELEVEN MONTHS.

BY CHARLES WICKS, L.R.C.P., L.R.C.S., L.M. EDIN.

ELEVEN months ago a child aged nine years and eleven months came under my care, complaining of præcordial pain, which extended down the left arm. On examination I found a double mitral murmur. Under treatment she greatly improved, and I did not see her again until Dec. 5th, 1893, when she complained of feeling unwell. The mitral murmurs were now markedly developed, and she experienced pain in the left knee, which was distinctly rheumatic. The following day (Dec. 6th) I saw her and found matters slightly improved, but at four o'clock on the same day I was sent for hurriedly and found her suffering from partial aphasia. Although conscious she had lost the power of the right side. The temperature was 104·2° F. and the pulse 120 per minute; the pupils were even and reacting to light; the patellar reflex was very slightly marked, while ankle clonus was very pronounced; swallowing was quite impossible; the patient's bowels had been opened the same morning, and she now passed urine involuntarily in bed. Knowing the child, and having had the opportunity of watching the case thoroughly, my diagnosis of embolus was easily formed and my prognosis grave. The temperature gradually rose from 104·2° to 106° and the pulse varied from 120 to 168. In the evening I called my friend Dr. T. Harrison Davison to see the case with me, and his opinion quite confirmed the diagnosis I had made. The patient passed slowly into profound coma at 8.30 P.M. and died at 1.30 A.M. on Dec. 7th. On obtaining permission to make a limited post-mortem examination the same day I

[1] THE LANCET, Dec. 16th, 1893.

found the mitral valves considerably thickened and bearing three distinct excrescences, a portion of one of which had evidently become detached; the left ventricle was hypertrophied; the other valves were healthy, but there were considerable pleuritic adhesions on the left side. On examining the brain it was for so young a person above the average size and weight. The meninges were healthy and no marked congestion or anæmia was to be noticed; but at the bifurcation of the basilar artery into the posterior cerebrals there was a large, pale embolus, with considerable thrombosis on either side, which seemed to have completely obstructed the circulation. This embolus was manifestly the detached excrescence, being quite organised. To my mind the points of interest in this case are: 1. The suddenness of the attack and its serious import. 2. The gradual succession of noticeable symptoms. At the last the temperature fell considerably. The right pupil was contracted to a pin point and the left widely dilated. Ankle clonus was very marked, the patellar reflex was exaggerated on the right side and only very slightly marked on the left, and there was complete coma. 3. The youth of the patient.

Fortune-green, West Hampstead, N.W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

ALCOHOLIC CIRRHOSIS OF LIVER IN A CHILD; ASCITES; MENINGITIS; DEATH; NECROPSY.

(Under the care of Dr. H. SAINSBURY.)

THIS case is of interest as an example of early alcoholic cirrhosis. The history of the alcoholism was clear, and the proof of the cirrhosis and portal obstruction was established both by symptoms and post-mortem evidence. It is also of interest as an example of ascites from cirrhotic liver successfully treated by tapping, and early tapping, for at the necropsy only "a little fluid" was found in the peritoneal sac. The death of the child was from an independent—so to speak, accidental—cause. Alcoholic cirrhosis in children is, of course, well recognised; the atrophic form is, however, very uncommon. Henoch cites only one case as coming under his own observation. Hypertrophic cirrhosis is much more frequent. In this particular case there was little deviation in either direction, judging by the weight. The case well illustrates the responsibility that attaches to the use of alcohol for medical purposes; it should always be employed as a drug, and both the dose and duration of its employment should be accurately prescribed. For the notes of the case we are indebted to Mr. W. H. Evans, registrar.

A child aged three years and nine months was admitted into the Royal Free Hospital on Oct. 8th, 1892, under the care of Dr. Sainsbury, suffering from ascites. There was a history of phthisis on the mother's side, but otherwise there was nothing of importance in the family history. The mother stated that the child had not suffered from any illness until she was a year old, when she began to look ill, lost her appetite, and later became semi-conscious and was taken to the Hospital for Sick Children, Great Ormond-street, where she was told that the child had severe bronchitis. She was taken home and was seen by the parish medical officer, who advised that she should have "twopennyworth of brandy" each day, as he thought she could not recover. After the illness had lasted for a fortnight she slowly improved and at length completely recovered, but the daily allowance of brandy was still continued, as she was considered to be weak. Two months before admission to hospital the child complained of pains in the chest and abdomen, and the veins of the trunk began to swell and the abdomen to enlarge. She gradually lost flesh and the abdomen continued to swell; the quantity of urine passed had much diminished, and it was stated that none had been voided in the twenty-four hours immediately preceding admission.

When admitted the patient was found to be much emaciated; the abdomen was much enlarged and globular in shape, measuring 25 in. in circumference; fluctuation and thrill could be readily obtained. The liver dulness extended upwards to the fifth rib in the nipple line, and below merged with the dulness of the abdomen, which was universal. The temperature was normal. On Oct. 11th, three days after admission, the abdomen was tapped, and ninety-six ounces of clear ascitic fluid were evacuated. The circumference was reduced to 19 in., and the lower half of the abdomen became resonant, while the liver could be felt reaching down to the umbilicus. After the tapping the fluid slowly reaccumulated until, a month later (Nov. 15th), the circumference had increased to 23 in. On again tapping the abdomen forty-seven ounces of fluid came away, and the measurement was reduced to 20 in. The temperature varied; as a rule it rose in the evening, sometimes even to 102° F., and fell in the morning, generally to normal. The patient's condition changed but little, and the abdomen slowly enlarged, but on the whole she was better when she was discharged on Jan. 19th, 1893.

The child was readmitted six months later, on June 7th. A week before, on May 29th, she began to vomit after food and complained of headache. The vomiting continued, but the bowels were constipated. Previously to this—i.e., since being discharged from the hospital—she had been fairly well, and no more alcohol had been given her. On admission the child lay in a semi-conscious condition. The head was retracted and there was slight internal strabismus of the left eye; the right pupil was larger than the left. The temperature was irregular, but steadily tended upwards. The vomiting continued until June 10th, and the patient had two slight convulsions. Pneumonic signs developed in the right lung, and on June 14th the child died, with a temperature of 103·8°.

Necropsy by Dr. ANDREWES.—Extensive basal meningitis was discovered, with much fluid in the ventricles. On the middle cerebral vessels some whitish nodules were seen, which may have been tubercles, but no unmistakable tubercles were found. The right lung was found to be consolidated, especially posteriorly. A little fluid was found in the peritoneum, but only in the smaller sac, and the great omentum was turned up and firmly adherent to the liver and stomach. The liver weighed twenty-two ounces, and was firmly adherent to the diaphragm. On section it was plainly, but not extremely, cirrhotic. No definite tubercles were found in any organ.

NORTH RIDING INFIRMARY, MIDDLESBROUGH.

EMBOLISM OF THE MESENTERIC VESSELS, WITH SYMPTOMS OF OBSTRUCTION; ABDOMINAL SECTION.

(Under the care of Dr. MUNRO.)

WE publish this week a case showing the results of embolism of branches of the inferior mesenteric artery. The symptoms produced by embolism in the mesenteric vessels are similar in character whether the branches of the superior or of the inferior artery are affected. In both intestinal obstruction is produced in the section of bowel which is more or less completely shut off from its supply of blood, and the condition is much the same as that found in paralysis of the intestine, the result of injury received in a hernial protrusion. We have published in THE LANCET[1] the description of a case under the care of Mr. McCarthy, in which acute intestinal obstruction resulted from embolism of the superior mesenteric artery, and in which, when abdominal section was performed six days after the commencement of the illness, perforation of the bowel with escape of contents into the peritoneal cavity had already taken place. At the post-mortem examination the source of the embolisms was found to be the aorta, which was very atheromatous. "When it was opened the inner surface, from the arch to the bifurcation, was seen to be thickly studded with circular masses of fibrin about the size of a sixpence. Some of these masses were adherent by their entire base, but others were only attached at one border, so that they waved about in the stream of water with which the vessel was washed. Beneath these masses the *intima* was completely eroded." Mr. Mc Carthy, in commenting on his case, referred to the employment of abdominal taxis in cases of intestinal obstruction, and showed how harmful it would be in similar ones.

[1] Mirror of Hospital Practice, March 22nd, 1890.

For the notes of this case and the following one we are indebted to Mr. G. Victor Miller, late resident surgeon.

A man fifty-one years of age was admitted into the North Riding Infirmary on Aug. 14th, 1893, complaining of abdominal pain, constipation, and sickness; in fact, symptoms of intestinal obstruction. He stated that about three weeks previously, when at work and in the act of lifting a heavy bar of metal, he felt a peculiar sensation in the lower part of his abdomen. This was followed by pain and a feeling of weakness, which necessitated his leaving work. On the same evening he passed from half a pint to a pint of blood by the bowel and the following morning he again passed about half a pint. He was away from work for a week, during which time he experienced, more or less constantly, colicky pains in the abdomen and also suffered from constipation, necessitating his taking a purgative. This latter fact was especially noticed by the patient, as he had been previously very regular in his bowels, rarely ever requiring opening medicine. He returned to work, but only for four or five days, the general weakness and abdominal pain compelling him to give it up. From this period up to the day of admission into hospital he said that his bowels had not been moved at all. He had taken purgatives himself and his medical attendant had also administered them, but without effect. He had been vomiting more or less the whole time and from what one could gather it was of a feculent character just prior to admission. The colicky pains were constantly troubling him and varied in severity; sometimes being very severe and then confined more to the region of the transverse colon. On admission the patient looked somewhat pale and exhausted; the tongue was foul and the temperature subnormal, and remained so, gradually falling up to the time of his death. The abdomen on inspection was found to be markedly distended, and the large bowel, especially the caput cæcum, appeared to stand out distinctly from the rest of the abdominal contents, and in the region of the left iliac fossa a distinct fulness was noticeable. On palpation the caput cæci could be felt to be extremely distended; also in the left iliac fossa a hard mass about the size of a large orange could be felt, which on percussion over it gave an obscure tympanitic note. There was no sign of a hernia, and nothing abnormal in the rectum. Dr. Munro at this time suggested embolism as a cause of the patient's condition, but the mass in the iliac fossa also inclined him to think it was possibly, or even probably, due to a tumour of a malignant character. Several copious enemata of soap-and-water were administered, but without any result. A grain of opium was also occasionally administered and fomentations applied to the abdomen to lessen the pain, and by way of nourishment small quantities of milk and soda water, frequently repeated, were given. The milk was retained, and, in fact, he did not vomit again until after the operation. This treatment was continued until Aug. 16th, but the patient's condition remained unaltered, and having obtained his consent to perform an operation it was decided to open the abdomen at once. Dr. Munro on opening the abdomen found the following conditions. The mass in the left iliac fossa was due to a large decolourised infarction in the mesentery of the sigmoid flexure. There were two infarcts also in the mesentery of the small bowel; these were smaller and retained for the greater part the dark colour of the blood and thus were more recent than that in the mesentery of the sigmoid flexure. The infarct in the sigmoid flexure was adherent to the anterior abdominal wall and to the iliac fossa. The ascending, transverse and descending colon were enormously distended and very dark in colour; the walls appeared to be thinned by the distension to which they had been subjected, and they had a doughy feel to the touch. The caput cæci was also enormously distended, but otherwise not so much altered. The small intestines were red and deeply injected, which, together with the more recent appearances of the infarcts, proves that the inferior mesenteric artery was first affected. The patient stood the operation well and progressed favourably for twenty hours, but then rapidly sank and died. Any further examination of the abdomen after death was unfortunately prevented.

Remarks by Dr. MUNRO.—I have taken the following from articles by Gerhardt and Kussmaul giving the diagnostic points of these cases: (1) a source of origin for the embolus; (2) profuse, even exhausting hæmorrhage from the bowels; (3) severe colic-like pains in the abdomen; (4) tension and tympanitic swelling, sometimes very marked; (5) considerable and rapid reduction of temperature; (6) demonstration of embolism in some of the other arteries; and (7) demonstration by palpation of infarcts between the mesenteries. In the case described it will be seen that nearly all the classical symptoms were present, and No. 7 in so marked a degree that its firmness and immobility simulated a tumour, and so led to the operation.

As there have been only two or three cases of iridodialysis recorded in which healing subsequently occurred, the following case may not be uninteresting.

IRIDODIALYSIS, FOLLOWED BY UNION AND RECOVERY.

(Under the care of Dr. MCCREINDLE.)

A man thirty-four years of age was admitted into the North Riding Infirmary on June 21st, 1893, suffering from an injury to the eye. He stated that whilst chipping a bolt-head a piece flew up and struck him in the left eye. The condition on admission to the infirmary was as follows. There was a wound one-sixth of an inch long towards the outer margin of the cornea. The iris at the same side was torn from its attachment for about one-sixth of an inch, a distinct gap being observable. The anterior chamber contained a quantity of blood. The eye was carefully washed with a 1 in 3000 perchloride of mercury solution, atropine was instilled, both eyes were bandaged, and the patient was confined to bed. In three days the anterior chamber was clear, and the patient could count fingers. On the fourth day the anterior chamber was found to be filled with blood again; it rapidly cleared, however, under the application of leeches, but a clot remained between the torn edge of the iris and the ciliary border. In the next few days the clot became decolourised, and union began to take place to all appearances through the medium of blood-clot. Iodide of potassium was at this time administered internally, and appeared to assist the healing process. From this time the case progressed well, and the patient left the hospital on July 27th. He started work a week afterwards, and has been at work since. The patient can count fingers, but cannot read print unless very large, such as the heading of newspapers and the large print of posters. The field of vision is contracted slightly at the upper and inner side, suggesting that there was probably some damage to the retina near the equator of the eye. The eye is perfectly quiet, the patient has no pain in it or tenderness on pressure, and tension is normal. The portion of the iris that was detached has a thinner appearance and seems to have a more open texture than the rest of the iris, and is somewhat frayed out at the pupillary border. The damaged portion of the iris does not contract to light. It is difficult to say whether there is a foreign body in the eye or not. It could not be seen on ophthalmoscopic examination, but that may be on account of its peripheral situation. If there is one present the eye may at some future time give the patient trouble and therefore a guarded prognosis was given.

PETERBOROUGH INFIRMARY.

A CASE OF GASTRO-ENTEROSTOMY FOR PYLORIC CANCER.

(Under the care of Dr. THOMAS JAMES WALKER.)

THE operation of gastro-enterostomy has been performed many times in this country and abroad, and has now taken a definite and important position in the limited list of means at our disposal for the relief of symptoms arising from pyloric obstruction. Of the various procedures advocated for dealing with constrictions at the pylorus this is the one which is most generally applicable, and which most undoubtedly affords benefit—sometimes great benefit—to sufferers, whether the obstruction be of a malignant character or not; in the former class of cases not only is life prolonged, but it is rendered endurable. It is impossible to give any statement of authority as to the length of time that life may be prolonged by the operation; this must vary in the individual cases, and depend on factors difficult to estimate. The operation under anæsthesia usually requires from twenty minutes to half an hour for its performance aseptically and with due precaution against leakage by careful suturing, and cannot be looked upon as formidable when we consider the advantages offered—relief of the pain, of the vomiting, and of the condition of starvation. That it has not attained to the position to which it is entitled is due, we think, to the fact that the patient is frequently not advised to submit to it until he is not only half starved in body but very generally depressed, and in no condition to undergo any procedure involving the administration of an anæsthetic. If the operation were performed at an early stage of the disease the mortality from shock as

the immediate result of operation or from lung complications should be small. At present we are not able to say that there will not be a return of symptoms consequent upon contraction of the opening; therefore, even if life should be prolonged for some months, anything which should enable us effectually to prevent this misadventure is eagerly sought for. What the result of suturing the edges of the opening in the manner adopted by Dr. Walker may prove remains to be seen. It is important that this result should be recorded. For the notes of this case we are indebted to Mr. P. Hope Murray.

A widow forty years of age, the mother of eight children, was admitted into the Peterborough Infirmary on April 29th, 1893, suffering from symptoms of pyloric obstruction, distension of the stomach, vomiting of long-retained food, and emaciation. A tumour was felt and cancer of the pylorus was diagnosed. The left mamma showed hardenings from accumulations of milk, as she had been suckling her youngest child. These disappeared upon the application of belladonna. After admission her general condition improved with rectal feeding and milk by the mouth, the quantity of milk being gradually increased. On May 18th the stomach, which had been much distended for several days, was washed out with a solution of salicylate of soda, forty ounces of fluid were introduced, and eighty ounces were returned. This washing out was done somewhat hurriedly before the operation, and was not entirely successful, as subsequent events showed. On the same day the operation was performed. The table was heated, the carbolic spray was used and strict aseptic precautions were taken, and an enema of brandy and soup was given. Ether was administered by Dr. Payne. An abdominal incision was made, about five inches long, half an inch to the left of the middle line and running down to half an inch below the umbilicus. On examination the pyloric cancer was found to involve part of the small curvature of the stomach, rendering removal out of the question. The omentum was thin and scanty, and was easily pushed over to the left side out of the way. The greater curvature was opened, and the stomach found to contain a considerable quantity of fluid; most of this was evacuated, but it was not found feasible to completely empty it, nor did this seem necessary. The peritoneal and mucous edges of the opening were stitched together, with the idea of preventing contraction. The jejunum was opened and the edges treated in the same way. Senn's plates were introduced, but before drawing the silk tight the peritoneum of the stomach and jejunum near the posterior edges of the plates were united with silk, thus forming a semicircle of stitches, guarding the opening posteriorly; the plates were then drawn tightly together; an anterior semicircle of stitches was now inserted, thus completing the circle of guarding stitches. The parietal peritoneum was closed with silk. The abdominal wall was united also with silk. After the operation the patient was fed by the rectum every four hours; tincture of opium was added to the enemata. On May 19th the patient had passed a good night. The morning temperature was 99·8°F.; the evening temperature was 99·6°. After this the temperature was not found above 99°. Morphia was given hypodermically once for sharp pain coming on occasionally. The patient vomited some of the contents of the stomach, previously imperfectly emptied. The next day she vomited again, bringing up some fig-seeds and orange septa. The same evening, at twelve midnight, she had a very serious cardiac attack, which seemed likely to prove fatal, the radial pulse being 80 and the heart beats 234, only every third beat or so reaching the radial; there were great prostration and pallor of the face, but no lividity of the lips; cardiac pain was also present and the heart was beating in a very flappy manner, the first sound being for some time hardly audible. After stimulation by the mouth and rectum and the administration of ether subcutaneously the heart improved a little. At 3.30 A.M. she was still very prostrate, but at 7.30 A.M. she had almost entirely recovered from the attack. The patient afterwards stated that she was liable to cardiac attacks, which appear to have been of an anginous nature. On the 23rd she vomited again, bringing up some whole figs, which had been surreptitiously eaten on May 14th or 16th, and which, owing to the deficiency of teeth, were not masticated. On the 25th the wound was dressed and the stitches removed; a little superficial pus was found around the stitches. On June 3rd she was discharged, the obstruction being cured.

Subsequent note.—In December, 1893, it was reported that the patient had been very well for some time after going home, and had gone out washing, besides looking after her family of eight children. It was also said that she had not been so well lately, but in what way is not known.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Acute Phthisis following Destruction of Mucous Membrane of the Stomach by Corrosive Fluids.—Suppurating Hydatid of Liver opened through Chest Wall.—Membranous Inflammation of the Throat during Scarlet Fever.

AN ordinary meeting of this society was held on Jan. 12th, Mr. HULKE, President, being in the chair.

Dr. SOLTAU FENWICK read a paper on two cases of Acute Phthisis following Destruction of the Mucous Membrane of the Stomach by Corrosive Fluids. A man aged thirty-four years was attacked with the symptoms of severe gastritis after swallowing some oxalic acid. Six weeks' pain and vomiting ensued, but the patient's strength was fairly maintained by means of nutrient enemata. After two months the stomach was found to be considerably dilated, the lower margin extending below the umbilicus. There was tenderness over the pyloric region, and vomiting of a sour, fermenting fluid with no trace of free hydrochloric acid occurred at intervals. Under lavage considerable improvement manifested itself. The patient gained flesh, and in two months his weight had increased by nearly eighteen pounds. The vomiting and pain were lessened in severity. Four months after the onset of the disease the patient contracted a cold and shivered, and the temperature, which had previously been subnormal, rose to 102° F. Cough, sweating, and rapid emaciation, with recrudescence of the gastric symptoms, developed, and death ensued within six weeks from acute phthisis. The necropsy revealed a condition of caseous tuberculosis invading both lungs from apex to base, with a small vomica in the right upper lobe. The stomach was greatly dilated, and its lining membrane was converted into a shining layer of fibrous tissue with numerous radiating bands. No trace of glandular structure could be detected by the microscope. In a second case a man aged thirty-two years, swallowed some nitric acid. Three months later he was suffering from some degree of dysphagia, with pain in the epigastrium and occasional vomiting. The stomach extended about one inch below the umbilicus, a splash was audible on palpation, with tenderness over the pyloric region. When a tube was passed a slight constriction was encountered at the lower end of the œsophagus. The stomach contained a brownish-coloured, sour-smelling fluid, with no trace of free hydrochloric acid. Under lavage and regular feeding by a tube the patient rapidly improved, the vomiting and epigastric pain became less severe, and the body weight increased. Seven months after the accident the patient began to suffer from cough and night sweats, and the temperature, which had previously been subnormal, rose to 102° F. These symptoms increased in severity, the gastric phenomena returned, and the signs of progressive consolidation of the lungs became manifest. Death ensued from exhaustion at the end of seven weeks. At the necropsy the lungs were found to be the seat of acute tuberculous affection from apex to base. The mucous membrane of the stomach was completely destroyed and was represented merely by a thin layer of fibrous tissue. The lower few inches of the œsophagus showed evidence of superficial cicatrisation of its mucous membrane, and at the pyloric end of the stomach a chronic ulcer was discovered, the contraction of which had caused stenosis of the pyloric orifice. Dr. Fenwick pointed out that in the Bulletin de la Société Anatomique de Paris M. Robert had given details of a very similar case. The cases were of interest from the fact that in each a corrosive fluid had completely destroyed the digestive activity of the stomach, while a fatal issue occurred after an interval of a few months from acute pulmonary phthisis, in spite of the fact that there existed no family tendency to this disease. It would, therefore, seem that the sudden impairment of nutrition had so diminished the resistance of the tissues as to render them peculiarly vulnerable to tuberculous invasion.—Mr. BARKER inquired what means were taken to ascertain the presence of free hydrochloric acid in the stomach.—Dr. GLOVER asked whether in the history of the first case there was any tuberculous element either in the family or the individual.—Dr. W. J. TYSON asked whether phthisis frequently followed gastric ulcer or abrasion of the mucous membrane of the stomach.—Dr. LONGMORE said that, in the absence of any history of tuberculous disease, it was

interesting to try to trace the occurrence of infection. There was probably no direct connexion between ulcer of the stomach and tuberculous disease of the lung.—Dr. CHAPMAN inquired whether any raw meat juice had been taken.—Mr. HULKE remarked that at present there were physiologists who taught that in some animals the stomach was an organ that could be dispensed with; in dogs the stomach had been excised and the duodenum united to the œsophagus with no apparent harmful effects.—Dr. FENWICK, in reply, said that he had used Gunzburg's test to ascertain the presence of free hydrochloric acid; it was said to indicate a ten-thousandth part of the acid when present in a free state. There was no phthisical history in either case. So far as he knew no raw meat juice had been taken. Dittrich had stated that 20 per cent. of cases of gastric ulcer died from phthisis. His own view was that if a man in previous good health suffered from destruction of the gastric mucous membrane with the resulting emaciation he was rendered more vulnerable to tuberculous infection.

Dr. W. J. TYSON related the particulars of a case of Suppurating Hydatid of the Liver opened through the Chest Wall. The patient was a woman aged thirty-one years, who in 1888 suffered from a slight attack of jaundice, and again in January, 1892. On Feb. 8th following she was admitted into the Victoria Hospital, Folkestone. The liver was then enlarged, extending below the ribs for four inches; all other organs were healthy; the evening temperature was 101° F. A week later signs of right pleuritic effusion developed, and the liver reached as low as the pubes; the evening temperature remained high. On Feb. 27th twenty-three ounces of serous fluid were drawn off from the right side. On March 3rd the posterior part of the chest was again aspirated and an ounce of purulent hydatid fluid escaped. On March 5th an incision was made into the eighth intercostal space posteriorly three inches in length. As soon as the pleura was opened an ounce of fluid escaped, and immediately an elastic swelling presented itself. The wall of this cyst was stitched to the external wound and the cyst laid open, when thirty ounces of thick pus full of "skins" of all sizes escaped. The cavity was not washed out, and a large indiarubber tube six inches in length was put in. External dressings of gauze and wool were then applied. There was no difficulty in putting in the uniting stitches between the wall of the cyst and the skin wound on account of the wide separation of the adjoining ribs. For three days after the operation about half a pint of pus and "skins" passed and the cavity was washed out with boric acid solution through the tube. On March 13th the breathing became audible over the base of the right lung and the liver dulness had disappeared. The discharge gradually became less, but the tube, although shortened from time to time, was not finally removed until February, 1893. The case when first seen was thought to be one of simple enlargement of the liver, but the rapid increase in the size of the organ and the evening temperature pointed to a suppurative condition. The presence of the pleuritic effusion was worthy of notice. There was never any sign of the liver contents entering the thoracic cavity after the operation. In such liver abscesses as the one described the opening through the chest wall posteriorly seemed to be the proper route to take, as being more direct and better adapted for drainage.—Mr. WALLIS remarked on the interest of the case as regarded the position of the hydatid in the convex or posterior wall of the liver. He did not quite agree with the method of operation which had been adopted. He thought it would have been better at first to do nothing more than make an exploratory puncture with a hypodermic needle and then later to have excised a rib or two and dealt radically with the hydatid. If the hydatids were still living the cyst wall could have been pulled out, or if suppurating it could have been treated as an ordinary abscess.—Dr. HALE WHITE had met with an almost exactly similar case. The chest of a woman had been tapped in August for what had been regarded as a simple pleuritic effusion, but she presented herself again recently with the signs of a thickened pleura. At a depth of three inches from the surface purulent fluid was drawn off, and Mr. Lane, who saw the patient later, also found pus. The liver extended distinctly below the ribs. A portion of the eighth rib was removed, and the whole pleura was found to be full of dead hydatids. The liver bulged up into the wound, and a needle inserted into it drew off thin pus. A knife was passed along the needle track and the incision enlarged, when an immense number of living hydatid cysts were turned out of the right hepatic lobe. The patient later was seized with dyspnœa and died from acute bronchitis, and at the necropsy the right lung was found to be no larger than a fist and to lay against the upper part of the spine. The left lung was healthy. The diaphragm on the right side had become exceedingly thin and atrophied, and its centre was blended with the upper surface of the liver. The left hepatic lobe had become hypertrophied, so as to be almost as large as the right, the latter being occupied by an enormous hydatid cavity.—Sir DYCE DUCKWORTH spoke as to the washing out of these cysts and stated his belief in the policy of non-interference, provided a sufficient exit were made, a large tube put in, the patient kept in a proper position, and surgical cleanliness adhered to. He thought that the majority of hydatid cysts and empyemata did better under this plan than when they were washed out.—Mr. HULKE said that the tendency was for the abscess to burst upwards. The cases which ruptured upwards could again be divided into two classes—those in which the hydatid burst into the lung first and caused a secondary empyema, and those in which the rupture took place primarily into the pleura. In the first class there was decided risk in washing out, for they resembled the empyemata communicating with a bronchus. In one case which had been irrigated with iodine traces of that substance could be detected in the fluid coughed up. He believed that the introduction of a small quantity of iodoform in mucilage would help to keep the cavity clean and sweet.—Dr. TYSON, in reply, said that the case was one of suppurating hydatid from the beginning. The first tapping emptied the pleura only, but the second entered the liver and struck the pus. A case of suppurating hepatic hydatid with ascites had been reported from Australia, but he believed that his was the first case in which there had been association with pleuritic effusion. He only commenced the washing out after a week, by which time the pleural cavity had become shut off by adhesions.

Dr. E. W. GOODALL and Dr. J. W. WASHBOURN communicated a paper on cases of Membranous Inflammation of the Throat during Scarlet Fever. They described a fatal case of membranous inflammation of the throat, accompanied by a rash. The diagnosis rested between—(1) severe scarlatina anginosa with membrane; (2) diphtheria with rash; and (3) co-existing scarlet fever and diphtheria. Subsequent desquamation and an absence of diphtheria bacilli on a careful bacteriological examination proved that the case was one of scarlet fever with membrane. The difficulty of diagnosis was due to the remarkable toughness and thickness of the membrane. Such a condition was uncommon, although it was well known that a membranous inflammation of the throat indistinguishable from diphtheria was quite common during the acute stage of scarlet fever. This condition had been found not to be true diphtheria by various bacteriological investigators. Drs. Goodall and Washbourn examined four cases of this nature, and failed to find diphtheria bacilli. Clinically, too, it was not diphtheria, for of 129 cases seen by them, only 2 developed croup and 2 subsequent paralysis. On the other hand, a membranous inflammation of the throat occurring during convalescence from scarlet fever was generally true diphtheria. In 4 cases examined by them they readily found diphtheria bacilli by cultivations, and they had notes of 11 cases in which the membrane spread to the larynx, of 3 cases which were followed by paralysis, and of 1 case in which the vulva became affected with diphtheritic inflammation. In 8 consecutive uncomplicated cases of diphtheria the bacilli were readily demonstrated. The conclusions drawn were that a membranous inflammation of the throat occurring during the acute stage of scarlet fever was generally not true diphtheria, but that a similar condition occurring during convalescence was true diphtheria. These conclusions were in accord with the bacteriological examinations made by several investigators abroad and by Dr. Klein in this country.—Dr. SIDNEY MARTIN said that the question of the nature of non-diphtheritic membranous sore-throat was an interesting one. Trousseau had recognised and described it, but with some writers it appeared to be the habit to regard all membranous sore-throats as diphtheritic. Diphtheria could now be defined as an acute infective disease, the membrane from which on cultivation yielded a specific bacillus, producing a poison which on administration to animals caused paralysis. He had recently seen a case in which there was patchy membrane in the throat, on the fauces, tonsils, and pharynx. Cultivations from this membrane gave only a large diplococcus and no diphtheria bacilli. Such cases yielded to local treatment with nitrate of silver. In another case of a more virulent nature,

in a girl fifteen years of age, who was an out-patient at the Brompton Hospital, the symptoms were those of fever, enlargement of the spleen, and asthenia, together with some redness of the throat. She died, and at the post-mortem examination two patches of membrane were found—viz., on the rim of the epiglottis and on one of the tonsils. Microscopically there was found an invasion of micrococci, which had spread quite into the tissue of the tonsil and epiglottis. This made the condition quite unlike diphtheria, which never penetrated below the surface. He believed that the membranous sore-throats of scarlet fever were produced by micrococci and other organisms not diphtheritic. The throat already attacked by scarlet fever poison was rendered less capable of resisting the invasions of other organisms.—Dr. HALE WHITE asked how soon the membrane would develop. He had seen a medical student who was seized with a rigor at 4 A.M., and who had been exposed to both scarlatinal and diphtheritic poison; by the afternoon his temperature was 103° F., the throat was red, and there were small patches of membrane on the uvula, pharynx, and posterior pillar of the fauces.—Dr. GLOVER inquired whether the patient had been exposed to the poison of scarlet fever, and what proportion of diphtheria cases presented a scarlet rash.—Dr. BENHAM wondered whether scarlet fever and diphtheria were really distinct diseases.—Dr. TURNEY asked whether in these cases the membrane was limited to the fauces. It might be an exaggeration of the condition of ulceration which was not rarely to be seen in scarlet fever and which might extend to the trachea. He had seen such ulceration recur two or three months after scarlet fever.—Dr. GOODALL said that it was clearly important to determine the etiology of these cases. He himself was convinced that the large majority of them were scarlet fever pure and simple. When there was membrane in scarlet fever it did not spread to the larynx and did not recur locally as it did in diphtheria. The membrane usually developed exceedingly early. No history of exposure to scarlet fever could be obtained in the case. Rashes were uncommon in diphtheria, but they did occur sometimes, were limited to the trunk, and were darker than the rash of scarlet fever usually was.—Dr. WASHBOURN, in reply, said that true diphtheria and scarlet fever might occur together. The only way to differentiate between them was by bacteriological examination. He had seen cases of ulceration of the larynx in scarlet fever, but it was unaccompanied by membranous exudation.

PATHOLOGICAL SOCIETY OF LONDON.

Inflamed Vermiform Appendix. — Cranial Deformity in Infants, with Fusion of Fingers and Toes.—Pyæmic Form of Actinomycosis in Man.—Aneurysm of Aortic Valve in a Child.—Ulcerative Colitis.—Exhibition of Specimens.

AN ordinary meeting of this society was held on Jan. 16th, Dr. PAVY, President, being in the chair.

Dr. FRED. J. SMITH showed a specimen of Diseased Vermiform Appendix removed from the body of a man aged forty years, in whom there was no history of any illness at all till last August, when he was admitted to hospital suffering from ordinary acute nephritis. This became practically well except for a trace of albumen. He returned in November with headache, hiccough, much sickness and severe diarrhœa; general œdema was also very marked. Cheyne-Stokes respiration appeared, and he succumbed to what was taken to be acute uræmia. There were never any signs or symptoms pointing to the right iliac region as being the seat of any mischief. At the post-mortem examination the kidneys were found to be enlarged, slightly mottled, and with somewhat adherent capsules. The stomach and intestine down to the colon showed patches of intensely red congestion, but no ulceration; the vermiform appendix, which was exhibited, was very pale, being about the shape, length, and size of an adult forefinger, and was curved on itself in a semicircle by the contraction of adhesions. In its mesentery there was a dark-black, hæmorrhagic swelling about the size of a nux vomica seed. He remarked on the curious absence of symptoms or signs resulting from what was evidently a typical example of recurrent appendicitis; he also thought that the specimen might throw light on the possible condition underlying many cases of appendicitis in which the patients recovered under medical treatment only.

Dr. WHEATON showed two specimens of Congenital Cranial Deformity in Infants associated with Fusion of the Fingers and Toes; they were obtained from children who were admitted into the Royal Hospital for Children and Women. The conditions were in all respects almost identical in both infants. The first child was three months old and the second two months old at the time of death. The deformity of the cranium was characterised by arrest of development of the base of the skull in an antero-posterior direction, the fossæ at the base of the skull being markedly contracted in the latter direction, especially the posterior fossa. The occipito-frontal diameter of the skull was only four inches in each case, whereas that of a newly born infant measured four inches and a half. The biparietal diameter was also four inches in each case, so that the cranial cavities were almost perfectly globular in shape. Owing to the defective development of the occipital portion of the skull the back of the head appeared to be nearly flush with the nape of the neck, thus giving the children a very peculiar appearance. A broad and continuous open suture extended from the posterior fontanelle to the root of the nose in both cases. There were Wormian bones present in several places. The margins of the bones bounding the sutures and fontanelles were irregular, and had a crenated outline; the frontal and parietal bones could be indented by the finger during life, and presented in both cases numerous elliptical pits on their inner surface, where the bone was extremely thin and even quite absent in places. In both children the fingers of both hands were fused into one mass, but the thumbs were separate. The metacarpal bones and phalanges of the two middle fingers appeared to be fused in one case and in the other case there were only four metacarpal bones, and the second fingers had no phalanges. The nails of several fingers were fused. The toes were fused together, with the exception of the great toes, which were separate in one of the children. Both children presented the appearances of hydrocephalus, without enlargement of the skull, the fontanelles and the membrane uniting the sutures being tense, and the pulsation of the brain could be both felt and seen. The bones of the face appeared to be normal. The skin of the body generally, and especially that of the face, was wrinkled and of a yellowish-brown tint, the nose was flattened and depressed, the ears wrinkled and small, and the tongue protruded from the mouth, so that the children had a very repulsive appearance. Both infants had "snuffles" and could not suck, requiring to be fed by hand. On post-mortem examination the brain appeared to have been compressed and bulged considerably when the dura mater was incised. There was no accumulation of fluid on the surface of the brain or in the cerebral ventricles; the convolutions were flattened and the antero-posterior diameter of the brain shortened in a manner corresponding with the shape of the cranial cavity. The occipital region of the brain was very small, so that the cerebellum was almost completely uncovered; the frontal region was also very small. There did not appear to be an absence of any convolutions, and there was no other disease except enlargement of the liver and spleen and fibrous hardening of the latter organ. With regard to the cause of the cranial deformity Dr. Wheaton said that the affection of the cranial bones evidently began late in intra-uterine life, since the brain was comparatively well-formed and the condition could not therefore be regarded as a slight form of the condition of anencephalus. On the other hand, the presence of the elliptical patches of atrophy of the cranial bones and their softness, together with the irregular crenated edges of the sutures and fontanelles, pointed to the presence of hereditary syphilis, as did also the presence of snuffles, the earthy complexion, shrivelled skin, sunken nose, and fibrous condition of the spleen. The irregular crenated outline of the margins of the bones forming the sutures was present in all the specimens of the skulls of cases of hereditary syphilis in the Museum of the Royal College of Surgeons of England. He therefore thought that the changes in the cranial bones were due to fœtal syphilis, although there was no clear history of syphilis. The condition of the fingers and toes he thought was probably due to compression by amniotic adhesions, perhaps associated with deficiency of liquor amnii. Inflammation of the amnion was probably often due to syphilis.

Dr. KANTHACK showed a specimen of the Pyæmic Form of Actinomycosis in Man. He remarked that actinomycosis usually spread locally by continuity or by the lymphatics, and that its dissemination by means of the bloodvessels was rare, though it was curious that the first case recorded by Israel in 1872 was an instance of this variety. Experimentally, workers had not succeeded in producing this condition in animals. The lesions of actinomycosis had been classified as infective granulomata; but

they differed from those of tubercle in their greater tendency to pus formation and to the after-formation of fibrous tissue. This latter was a condition which prevented metastatic diffusion. The large size of the fungus could not explain its want of tendency to become pyæmic, because in its earlier stages it existed in the coccus form and increased by the throwing out of fine mycelial processes. In the case under consideration the deposit occurred primarily in the liver or in the base of the right lung. These areas were occupied by a soft breaking-down mass suggestive of tubercle. It had spread downwards through the supra-renal body to involve the upper part of the right kidney. The left lung in its upper and lower thirds showed masses which looked like tubercle. As the mediastinum was free the disease could not have spread to the left lung by continuity. There was a body like an infarct in the spleen, a soft nodule containing actinomycosis fungus. Subcutaneous abscesses developed under the skin in several places. All these contained yellow pus, with actinomycosis granules. He embedded this pus slowly in celloidin and stained by Weigert's modification of Gram's method, demonstrating the clubs by Delafield's hæmatoxylin and acid fuchsin. To stain the pus from actinomycosis it was best to run it into absolute alcohol and then embed the coagulated mass. In over 300 specimens examined from this case clubs were for the most part absent, some indication of them being found only in the liver and the lung. He thought that the rays were of no importance whatever in diagnosis and believed that when present they were degenerative products reacting like hyaline. Wherever the inflammation of the granuloma was recent, mycelial threads were found amongst the pus cells. He showed specimens from the yellow variety of "Madura disease" to illustrate the resemblance to actinomyces in the arrangement of the mycelium; the fungus in the two diseases he believed belonged to the same class.—Dr. TOOTH said that the appearances of the lungs to the naked eye were quite those of miliary tubercle, small grey granulations being scattered through the organs. Masses like yellow tubercle were also present, though the resemblance in these was not so distinct.—Dr. WHEATON asked why the non-existence of clubs was regarded as of such little importance. He had published a case occurring in a young child which appeared to be identical with the one shown, but he regarded it as a species of aspergillus on account of the absence of clubs.—Dr. BOYCE said that in the specimens he had seen the clubs were much more marked. The mycetoma of the white variety of "Madura disease" was allied to actinomyces. In the specimens shown it was possible that a degeneration was obscuring the nature of the fungus.—Mr. SHATTOCK had seen some specimens belonging to Mr. Crookshank sent from New Zealand, in which the actinomycosis nodules were devoid of clubs.—Dr. R. E. SCHOLEFIELD asked what was the relation of actinomyces without clubs to the disease described by Eppinger of Gratz, in which, in the body of a child thought to have died from phthisis, a mycelium without clubs was found. Cultivations were made and inoculated into rabbits, and produced a miliary tubercle in these animals similar to that in the lung of the child. These tubercles on examination were again found to present a mycelium without clubs. It was possibly the mycelium of cladothrix, which formed no clubs.—Dr. KANTHACK, in reply, said that the specimen of bovine actinomycosis he showed came from New Zealand, and in many cases of undoubted actinomycosis specimens would be found without rays. The mycelium of cladothrix had smaller threads and formed smaller masses.

Dr. VOELCKER showed a specimen of Aneurysm of the Aortic Valve which occurred in the case of a child one year and six months old, who died in Middlesex Hospital from capillary bronchitis three weeks after an attack of measles. There was no family history of rheumatism. At the post-mortem examination extensive bronchitis and collapse of the lungs were found. The heart contained a pale adherent clot on the right side. The left ventricle was not much enlarged. On the posterior cusp of the aortic valve there was a mass the size and shape of a small cherry-stone. This was moulded by the semilunar cusps and projected down towards the ventricle, dragging the aortic cusp with it. The mass was composed of blood-clot; the valve itself was not perforated. There was no sign of endocarditis on any of the other valves. There were no infarcts. Dr. Voelcker discussed the origin of the mass producing the aneurysmal pouching of the cusp, and held it to be improbable that it was a simple vegetation from endocarditis occurring in the course of measles, because there were no other evidences of endocarditis, the aortic valve being also an uncommon seat of vegetative endocarditis in young children. It appeared to be too extensive for a hæmorrhage into the valve, causing separation of the endothelial coats and then rupturing externally, for no endothelial coat could be detected over the mass with the microscope. It seemed to be most probable that a patch of fatty degeneration had altered the nutrition of the overlying endothelium, that fibrin had been deposited from the blood, moulded into form by the other cusps, and the patch, yielding to the blood pressure above the cusps and being dragged down by the mass, had formed an aneurysmal pouching of the valve. Such polypi on the cusps of the aortic valve in children he believed to be rare.—Dr. FYFFE had recently seen a very similar case at Victoria Park, involving the mitral valve. He stained by Gram's method, discovered the presence of micro-organisms and regarded the case as one of infective endocarditis.—Dr. WHEATON said that the late Dr. Hadden had showed a specimen involving the mitral valve of a child a few days old; it had perforated just before death. That was regarded as a case of ulcerative endocarditis. He had seen specimens from this disease in which the infection was limited to one spot.—Dr. VOELCKER, in reply, said that there was no evidence of infective endocarditis in the body elsewhere, either before death or afterwards.

Dr. TOOTH showed the Large Intestines from two cases, both women, aged respectively thirty-six and thirty-two years, who had died after severe and uncontrollable diarrhœa, which had lasted for seven weeks in one case and for ten weeks in the other. The large intestine in the first case was ulcerated more or less from one end to the other. The remaining mucous membrane was swollen, red, and spongy looking. Where ulcerated the muscular coat was bare. In the second case the ulceration was still more extensive. Large tracts of the bowel were devoid of mucous membrane, all that was left being small polypoid tags. In this case there was also extensive erosion of the caput coli, leading to the formation of a fæcal abscess in the pelvis. The microscopical examination showed inflammatory swelling of the submucosa with necrosis of the mucosa and, finally, infiltration of the muscular coat by inflammatory leucocytes. Such solitary glands as remained seemed to be natural. There was no affection of the mesenteric glands. Reference was made to the preponderance of cases of the female sex, to the onset of the disease as being apparently a simple diarrhœa, the absence of sloughs, the absence of fever and rigors, and the absence of metastatic abscesses.—Dr. ORMEROD said that of the two cases he showed one was simple ulceration with little tags of mucous membrane left between the ulcers, and in the other the ulcerations were deep and there were numerous perforations. In two cases fissure of the rectum with ulcer was present and the detection of this condition might be an aid to diagnosis.

The following card specimens were shown:—

Mr. JACKSON CLARKE: Distoma Crassum.

Dr. VOELCKER: Healed and Healing Tuberculous Ulcers of the Small Intestine.

OTHER METROPOLITAN MEDICAL SOCIETIES.

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held on Thursday, Jan. 4th, Mr. MALCOLM MORRIS, President, in the chair.—Dr. SIDNEY PHILLIPS showed a patient with a Syphilitic Gumma associated with a Secondary Eruption.—After some remarks by Mr. COSENS, Dr. GIBBON said that he doubted whether the eruption was at all due to syphilis.—Mr. LOCKWOOD said the gumma had run a very unusual course, supposing it to be a gumma, and Dr. SIDNEY PHILLIPS replied.—Mr. C. B. LOCKWOOD then read a paper on the Transient Aphasia occurring during the Course of Syphilis. The first case was that of a man aged twenty-eight, who was seen in May, 1882, with the remains of an indurated sore upon the prepuce, local and general enlargement of the lymphatic glands, a roseolous papular eruption upon the trunk and limbs, and inflammation and superficial ulceration of the throat. Sixteen months later, when his symptoms seemed to have disappeared under a course of mercury and iodide of potassium, when sending off a telegram, he found himself unable to remember a short, familiar word. He had had a similar attack a week before, but it hardly attracted his attention. There was no headache

or giddiness or visual trouble during either attack. He was put upon a further course of mercury and iodide of potassium, and had had no recurrence of these symptoms, while his syphilis seemed to be quite cured. The only things which could be ascertained about his habits which could have any bearing upon his symptoms were rather excessive smoking and an indulgence in alcohol somewhat beyond the point to which a person with syphilis ought to go. Last year another case occurred resembling it in many points. The patient was a man aged thirty-three years, who enjoyed good general health, and whose abilities and education were both beyond the average. In April, 1892, he contracted syphilis. He had a sore upon the prepuce, local enlargement of the inguinal lymphatic glands followed by a general lymphatic engorgement, inflammation and superficial ulceration of the tonsils, and a roseolous and papular eruption upon the abdomen. These symptoms soon yielded to mercurial treatment, but in October, 1892, he had three small rupial ulcers upon the legs. These disappeared under iodide of potassium combined with Donovan's solution. In August, 1893, he appeared to be convalescent. In September, however, he went into a shop and was alarmed to find that, although he could think of the word he wished to pronounce, he was quite unable to articulate it, although other words were at his command. He also volunteered the information that during this attack the right side of his mouth twitched and his right arm felt numbed and awkward. There was never any pain, dimness of vision, or vomiting. Six days afterwards he had another attack of the same kind, but altogether slighter. He was put upon a course of mercury and iodide of potassium, and had had no further trouble. Mr. Lockwood said that the attacks might have been mere attacks of megrim; but this seemed to be negatived by the entire absence of pain, of dimness of vision, of vomiting, or of any history of other attacks which could have been megrim. The aphasia and in the last case the twitching of the face and numbness of the arm were the only symptoms like those of megrim, and, according to Dr. Liveing, the two last of these ought to have been bilateral. Clearly the megrim hypothesis might be rejected. Nor was it rational to suppose that a hæmorrhage had occurred into any part of Broca's convolution. Hæmorrhages are very uncommon in syphilis. A gumma, too, would have produced more severe and permanent effects, as would also a syphilitic endarteritis. A vaso-motor disturbance in the left Sylvian artery causing temporary anæmia would perhaps explain the symptoms, but vaso-motor disturbances were hardly ever seen elsewhere during the course of syphilis. But whatever the cause, it was obvious that the two cases were very different in character. The first was a case of amnesic aphasia. The patient had lost the faculty of creating a word to represent an idea; indeed, he had probably lost the faculty of recalling the idea itself. His motor apparatus, on the contrary, seemed to be in working order. The second patient had aphemia or motor aphasia. He had the idea and the word in which he was accustomed to give expression to the idea, but his motor apparatus would not work. At the same time he had a motor disturbance of the right side and of the right arm, so that the lesion, whatever it may have been, had originated in Broca's convolution, and had overflowed it and affected the neighbouring cortical motor areas.—Dr. GIBBON said that he believed such cases were not uncommon and could be cured, or at least much benefited, by specific treatment together with a rigid abstinence from alcohol.—Dr. LEONARD GUTHRIE believed that syphilitic aphasia was usually due to occlusion of the left Sylvian artery or of its branches which supplied Broca's convolution. Sir William Broadbent attributed such occlusion to periarteritis rather than to syphilitic endarteritis. If this were so, sudden increase of vascularity in the growth encircling the vessel might produce sudden but temporary obstruction and transient aphasia; or irritation of the bloodvessel by such perivascular growth might set up passing spasm of its walls and thus produce anæmia of the speech centres and consequent aphasia. Here the pathology approached that of migraine, whose presence Mr. Lockwood had negatived in his cases. Mr. Lockwood's second case might have been migraine. Both were temporary verbal amnesia rather than true aphasia and resembled cases of simple functional aphasia, to which all, especially nervous, self-conscious people, were subject.—The PRESIDENT and Dr. S. PHILLIPS having taken part in the discussion, Mr. LOCKWOOD replied.—Mr. WATSON CHEYNE read a paper on the Treatment of Cancer of the Breast, and in the first instance discussed the question of the constitutional or local origin of the disease. He pointed out that the pathology showed that carcinomatous tumours only begin in epithelial structures, and that, therefore, where scirrhus is found in the glands, muscle, &c., after removal of the breast, it cannot mean a fresh manifestation of a constitutional disease, but must imply that the attempted removal had been incomplete and that portions had been left behind at the time of the operation to grow subsequently. He referred also to the marked increase in the percentage of cases where no recurrence had taken place since as the result of recent researches, the operation having been made more extensive and complete. He further mentioned, with regard to the subsequent appearance of cancer in the second breast—a point made much of by the supporters of the constitutional view—that it had been recently demonstrated that in some cases a communication existed between the lymphatic systems of the two breasts, and that thus it was probably a direct infection from the one first affected. He emphasised the fact that for success operations must be done early and thoroughly. As to early operation, he referred to the diagnosis of cancer, and asked why, if there was any suspicion of cancer, a swelling in the breast was watched. He insisted on the great importance in suspicious cases of an exploratory incision, so as to settle the diagnosis at once, and pointed out that if the swelling should turn out to be inflammatory a free incision was the quickest and surest method of cure. In discussing the method of operating he stated that the old plan was wrong in every particular, and said that it was of the utmost importance in all cases to remove the whole lymphatic area up to and including the axillary glands, the skin over the prominent part of the breast and over the tumour, the whole breast, which is in reality very extensive, the pectoral fascia beneath, with a thin layer of the surface of the muscle, the fat and fascia leading to the axilla, and the whole of the glands and fat in the axilla should be dissected away in all cases. He then referred to his results, and stated that of the first 20 cases operated on in this way during 1890, 1891, and 1892, 14 to his knowledge remained well and 4 had recurred. Taking only those done in 1890 and 1891—that is to say, more than two years ago 15 in number—10 remained well, 4 had recurred, and he had not yet heard from one patient. This gave a percentage of recovery lasting for two years or more of 66 per cent., and as recurrences generally took place in from six to eighteen months there was a great probability that a considerable proportion of these ten cases would remain permanently well. He did not assert that this was at all the ultimate probable percentage of success, but it indicated a greatly better prospect than by the ordinary imperfect operation. He did not think that allowing for accidents, intercurrent diseases &c., the mortality of the complete operation ought to be more than from 2 to 4 per cent. In conclusion he referred to the cases suitable for operation and those in which operation was contraindicated.—Mr. LOCKWOOD quite agreed with Mr. Watson Cheyne that operations upon cancer of the breast ought to include a thorough removal of the whole gland, subpectoral fascia, and axillary lymphatic glands and fat. He never operated without opening the axilla. Medical practitioners were not always to blame for delay, because women shrank from such a mutilation as removal of the breast.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—A meeting of this society was held on Thursday, Jan. 11th, Dr. HENTY in the chair.—Dr. REMFRY read a paper on the Use of Ergot. He commented on the action of the drug on unstriped muscular fibre, criticising the examples usually given of its use—viz., on the arterioles and on the uterus. As a general hæmostatic, it was not satisfactory, but in the pregnant uterus and in the parous, non-pregnant uterus on account of the large mass of muscular fibre a powerful constricting effect was exercised on the uterine vessels. The dangers of its administration during labour except in one or two special cases were discussed. After labour and during the puerperal period, in accidental hæmorrhage, and in various forms of abortion, its use was considered and criticised. The combination of drugs with ergot was described and commented upon.—Mr. SWORN criticised the paper and mentioned how frequently ergot failed in arresting uterine hæmorrhage when hot water applied locally proved successful.—Dr. F. SPICER thought that Dr. Remfry held too strong views on the in advisability of administering ergot during pregnancy.—Dr. GLOVER was in the habit of using ergot just as the head was

about to be born, with, he considered, good results; he also alluded to the lessening use of ergot in hæmoptysis.—Dr. DINGLEY mentioned the idiosyncrasy of patients as determining the value of ergot. He preferred to use ergotin by hypodermic injection.—Dr. MALCOLM supported the view that local applications are more to be depended on for the arrest of uterine hæmorrhage.—Dr. PATTERSON remarked on the different results due to various preparations of ergot used, and, as a consequence, such experiments as those of Drs. Herman, Boxall, and Dakin cannot be compared. He suggested that ergotin should be used as the standard preparation.—Dr. DAY used ergot less and less in practice. He spoke of the uncertainty of its effect, and said that in most cases it should be combined with opium.—Dr. REMFRY replied to the numerous criticisms on his observations.

PROVINCIAL MEDICAL SOCIETIES.

BOURNEMOUTH MEDICAL SOCIETY.—At a meeting of this society held on Dec. 15th, 1893, Mr. C. H. WATTS PARKINSON, President, in the chair, Dr. RAMSAY showed a case of Cystic Hygroma in the Groin in a child aged five years. The tumour was noticed at birth and tapped; it refilled and ulcerated, and was then ligatured unsuccessfully. When the child was three years and a half old the tumour was freely removed with the knife and the wound allowed to granulate. When shown to the society in February, 1893, the scar had become cystic, there being flaccid collections of fluid spreading under the integuments in all directions. In April the scar and surrounding tissue were again cut freely away; the sheath of the external oblique being involved, it was dissected off. The wound healed by first intention, though there had been subsequent stretching of the scar. Sections of the growth showed small cystic and intracystic growths with no definite epithelial lining.—Dr. Ramsay also showed a case of Traumatic Sarcoma of Pericranium, which came under observation six weeks after a blow, at the site of which, on the right frontal bone, a tumour presented. It gave no pain and had been removed by a crucial incision, the temporal artery requiring ligature; the pericranium was cut through three-quarters of an inch from the edge of the growth and the tumour easily stripped off with it; a piece of the temporal muscle was removed with the growth at the lower border. No necrosis followed, and the wound quickly healed. At the time of showing, two months after the operation, the growth had recurred in the scar, a small ulcer occupying the centre of the scar, surrounded by a raised indurated ring of skin.—Dr. MARRINER showed specimens of hair exhibiting Trichoclasis, called also trichorexis nodosa. The subject of the disease was a healthy man leading an active life; it affected the hairs of the moustache only, among which there were many in process of fracture and disintegration.—Dr. MASTERS read notes of a case of Induction of Premature Labour in the Albuminuria of Pregnancy.—Dr. LAWTON spoke of the value of nitro-glycerine in conjunction with general measures of treatment in this affection; he also dwelt on the liability in this condition to precipitate as well as premature labour.—The PRESIDENT likewise spoke of the value of nitro-glycerine.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 9th, Mr. JOHN APPLEYARD, President, in the chair.—Mr. HORROCKS read the notes of a case of Mammary Hypertrophy in a young unmarried girl. There was considerable œdema of the under surface of the breast, with general hypertrophy and overgrowth of the nipple; histologically there was great increase in the connective tissue, with relative decrease in the glandular structure.—Dr. HERMANN BRONNER narrated a case of a primipara in whom the last stage of labour was extremely protracted and had to be terminated by forceps. The right arm was found fixed across, behind the occiput, by two turns of the cord, and the left arm across, beneath the chin, with the left elbow opposite the right ear; this arm had hindered expulsion by preventing flexion of the head.—Mr. ALTHORP read a paper on a case of Auricular Fistulæ and dealt generally with abnormalities of that region resulting from developmental irregularities.—Mr. Appleyard, Dr. Johnstone, and Mr. Horrocks discussed the paper.—Dr. MAJOR read a note on grave Cerebral Symptoms arising in the course of Rheumatic Fever. No post-mortem evidence of cerebritis or of meningitis was, he said, ever found, and these symptoms might as a rule be taken to be due to the development of hyperpyrexia, which was the danger to be guarded against.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—An ordinary meeting of this society, at which Dr. WALTER HUNTER presided, was held on Jan. 3rd, when Mr. TRESSIDER proposed the following resolutions, of which due notice had been given: (1) that this meeting considers it unprofessional for registered medical men to give anæsthetics for unregistered or advertising dentists; (2) that the Notts and Derbyshire Dental Association be asked to furnish every registered medical practitioner in the neighbourhood with a printed list of those local dentists whose names are on the register and who do not advertise.—Mr. ANDERSON seconded these resolutions and Mr. BLANDY, the President of the Notts and Derbyshire Dental Association, spoke as a visitor, and they were carried.—Mr. KINGDON showed a baby suffering from a rare and fatal form of infantile disease, in which muscular weakness was a prominent symptom, associated with symmetrical changes in the macular regions of the eyes. He also showed a drawing of the fundus demonstrating this macular change.—Dr. HANDFORD brought forward a Rectal Polypus which had a peculiarly long pedicle. The tumour was removed by Mr. Waring, who explained that by means of an enema the polypus had been brought within reach and its removal thus facilitated.—Dr. W. B. RANSOM showed microscopical specimens of: (1) Renal Adenoma; (2) Malignant Adenoma of Cervix Uteri; and (3) Blood of Pernicious Anæmia. He also showed a new form of inhaler, devised by himself, by means of which substances could be vaporised, but inhaled dry. He then read notes of two cases of Pleuro-pneumonia associated with Hemiplegia, in one of which the paralysis was caused by a small patch of softening in the crus, demonstrated at the necropsy, in the other by abscess.—The brain in this case was shown, and was seen to be riddled with abscesses.—Dr. CATTLE showed a microscopical specimen of the Eggs of Bilharzia.

PLYMOUTH MEDICAL SOCIETY.—A clinical evening of this society was held on Jan. 6th in the society's library.—Dr. FOX showed a woman aged thirty-eight years in whom were developed in September, 1891, scars over both patellæ, the result of gummata of the bursæ patellæ. At the same time there was ulceration of the extensor surfaces of the arms and of the soles of the feet. There was no history of sore-throat, rash, or miscarriages; after a month's treatment with iodide of mercury all the sores healed. On April 17th, 1892, three weeks after discontinuing the medicine, the patient was seized with left hemiplegia, and after discontinuing treatment for four months the ulceration recommenced, and a month later she had a second attack of hemiplegia. Under massage and electricity she slowly recovered power in the left arm, when she developed influenza, and a fortnight later complained of pains round the chest in the infra-mammary region, which were not relieved by pressure or poultices; there was frequent vomiting. On Oct. 9th, 1893, she was admitted into the South Devon Hospital, and a week afterwards became acutely maniacal, and on improving suffered from delusions. On Dec. 5th she was discharged from the hospital, the paralysis remaining much the same as before the attack of influenza.—Mr. WOOLLCOMBE showed the Hardened Brain and a Microscopic Section of a Tumour which sprang from the dura mater over the sphenoid bone, and involved the base of the brain. The patient, a girl eleven years of age, had been bright and intelligent up to five months before death, when she complained of occasional vertical headache, the sight became dim, and in four weeks almost *nil*, but no optic neuritis was found. She became more and more drowsy and irritable when disturbed; the pupils varied and there was cyclopleglia. The knee-jerks were absent and she continued to lose flesh; there were occasional causeless vomiting and complete anorexia; right-sided ptosis developed after the tenth week of illness. At the necropsy a growth, partly fibrous and partly soft, containing calcareous particles was found springing from the pituitary fossa; the optic commissure had disappeared. The growth was an ossifying spindle-celled sarcoma.—Dr. FOX demonstrated a microscopic specimen of kidney showing small, hard, white masses in the cortex, apparently steatomatous in nature.—The following is the list of officers for the present session:—President: Mr. Connell Whipple. Vice-Presidents: Messrs. E. M. Russel Rendle, T. Leah, and G. Thom. Hon. treasurer: Mr J. Elliot Square. Hon. librarian: Mr. C. E. Russel Rendle. Hon. secretary: Mr. Reginald H. Lucy.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At the meeting of this society on Dec. 21st, 1893, Mr. RICHARD FAVELL being in the chair, the following specimens were shown.—Dr.

KNOX showed a Bowel with Congenital Atresia of the Small Intestine. There was a complete interruption in the continuity of the canal about the lower part of the jejunum; the gut above the discontinuity was dilated and hypertrophied, and below it was comparatively very small.—The PRESIDENT showed a Fibroma of Labium.—Mr. BURGESS brought forward: (1) a Heart from a boy fifteen years old in which the membranous portion of the septum between the ventricles was not closed, and the aorta arose from the right ventricle; and (2) the Large Bowel from a case of severe Ulcerative Colitis.—Dr. WILKINSON showed a Sarcoma of the Uterus and Microscopic Sections of the Growth. The patient died from extensive secondary deposits in the lungs two months and a half after hysterectomy had been performed by Dr. Laver. Attention was drawn to the rarity of sarcoma of the uterus, only eighty-one cases having been recorded, and to the similarity of the temperature charts to those of pyæmia.—The following cases were then introduced by Dr. ARTHUR HALL: 1. A woman with a Supernumerary Nipple which had secreted milk after each lactation except the first. The literature of recorded cases showed, that whereas accessory nipples were by no means uncommon, yet a physiologically active accessory breast was distinctly rare. 2. Lupus Erythematosus in a woman sixty years of age, which began five years and a half ago after a visit to the seaside as a very irritable swelling of the nose, cheeks and eyes. The whole face above the naso-labial folds was more or less affected, and also the scalp in parts. 3. Chronic Hodgkin's Disease in a young woman. 4. A boy nine years old with a Cerebellar Tumour. An attack of brain fever six months before admission into the public hospital was followed in a few weeks by difficulty of walking, headache and vomiting. His gait on admission (February, 1893) was very curious It resembled the movements of a man balancing himself on a tight rope with a weight fixed to the back and left side. There was optic atrophy and the field of vision was very small. In October, 1893, the difficulty of walking had quite disappeared and the field of vision largely increased in size. He still suffered from some headache and had occasional fits.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SURGICAL SECTION.

Operative Treatment of Enlarged Prostate.—Laminectomy in Spinal Injuries.

A MEETING of this section was held on Dec. 8th, 1893, Mr. NIXON being in the chair.

Mr. ARTHUR CHANCE read a paper on the Operative Treatment of Enlarged Prostate. He referred to a man aged fifty-six years on whom he had operated by the supra-pubic method Electrolysis had first been tried, but gave only temporary relief. The growth showed the "uniform circular enlargement surrounding the internal orifice of the urethra" described by M'Gill. Prior to the operation the urine had been passed on an average every ten minutes; but now, more than ten months after the operation, the man could hold his urine with ease for ten or twelve hours. Mr. Chance considered that a catheter did not completely empty the bladder, and that therefore the usual method of estimating residual urine was open to fallacy. He advocated the use of a flushing gouge for the removal of the growth, for the reasons that it could be readily manipulated through a small incision and also because of the value of a stream of hot water in stopping hæmorrhage. He thought the supra-pubic drainage really meant overflow, and he therefore advised the insertion of a perineal tube as an addition to the supra-pubic operation. In conclusion he strongly urged the propriety of early operation.—Mr. KENDAL FRANKS congratulated Mr. Chance on the success attending this case. He entirely agreed with him as to the value of supra-pubic drainage, but he thought that where they had a healthy perineum they should deal with it there because it was putting the drainage in the most dependent position.—Mr. MYLES thought the paper presented a subject of the greatest importance and difficulty. His own experience was that the diagnosis of these cases was not at all simple.—Mr. CHANCE, in reply to Mr. Franks, said with regard to the closing of the bladder, that the probability of failure would be very much diminished if perineal drainage was employed, because there would then be no strain on the bladder. He admitted with Mr. Myles that the difficulty of diagnosis was great, but he always adopted the precaution of first reducing any inflammation by mild measures, and he thought that after that the age and symptoms would lead them to a right conclusion.

Mr. T. MYLES then read notes of a case of Laminectomy for Spinal Injuries, in which a man who had been admitted to the Richmond Hospital for paraplegia, the result of a fall from a cart on to the back of his head, had been operated on by him. The symptoms that were held to justify the operation were the presence of motor paralysis—complete in the case of the legs, incomplete in the arms,—persistence of cutaneous, sensibility, and the existence for twenty-four hours of reflex irritability in one lower limb. Mr. Myles described the operation and the fatal termination of the case, and discussed the phenomena associated with these grave injuries, pointing out that it was only in fractures caused by direct violence that any reasonable hope of benefit by operation existed.—Mr. F. A. NIXON said that the operation was performed with great manipulative skill, and the cord on exposure seemed to him to be intact and surrounded by its normal coverings.—Mr. DOYLE and Mr. KENDAL FRANKS also spoke.—Dr. J. BARTON inquired as to the condition of the cord on making a post-mortem examination.—Mr. MYLES, in reply to Dr. Barton, said that no microscopic examination had been made owing to the specimen having been mislaid. The cord had the appearance of being slightly bruised and flattened, but its continuity did not appear to be disturbed. He had hoped that the physiologists would be present, as he thought they might enlighten them regarding the process of evolution which the physiology of the spinal cord was undergoing at present, judging from experiments on animals. It seemed to him that the clinical value of the spinal reflex was misunderstood.

MEDICAL SECTION.

Malignant Endocarditis.—Thrombosis of the Portal System.

A meeting of this section was held on Dec. 15th, 1893, Dr. W. G. SMITH being in the chair.

Mr. BURGESS read a paper on a case of Malignant Endocarditis in a married woman aged thirty years, who was six months pregnant. The chief interest lay in the obscurity of the case from the first, and likewise that it differed from the description of recorded cases in its symptoms. The prominent symptoms were pain of a lightning character, shooting in paroxysms from the inside of the knee to the base of the abdomen, and a fixed pain at the symphysis pubis; there was also, after a time, paralysis of the bladder. The temperature was 101° F., and a murmur was apparent from the first in the mitral valves, substituted in character. Miscarriage took place on the seventh day, but as the sequelæ gave rise to no fresh symptoms, it was not regarded as a complication. On the eighteenth day embolism of the left cerebral artery occurred, followed by rapidly increasing coma and death on the twentieth day. The remarkable points were: 1. Murmur, which was present from the first, with an absence of any previous history of rheumatism. 2. The nervous phenomena, which were the distinct features. 3. The temperature, which was of the continuous type. 4. Its already alluded to difference from the ordinary forms of pyæmia—cerebral, cardiac, or septic. 5. No occurrence of emboli took place until the eighteenth day, and there were no signs of renal or splenic embolism the whole time. 6. The peculiar absence of perspiration. The treatment was symptomatic.—Dr. TWEEDY and Dr. MOORE commented on the difficulty that frequently existed in making an early diagnosis with accuracy.

The PRESIDENT then related a case of Thrombosis of the Portal System in a man aged thirty years. He was anæmic, the legs were swollen, but there was no albumen in the urine, either then or subsequently. Some months later he was admitted into hospital for severe abdominal pain, which had developed thirteen days previously. He was very weak and sallow, and suffered from dry retching. The abdomen was distended and tender. It was dull at the lower part and sides, and fluctuation could be detected; there was no enlargement of the cutaneous veins. A systolic murmur was heard over the heart, at the base and apex. The bowels were loose and there was pyrexia. He became worse and died in collapse after a week's stay in hospital. Post mortem the liver was found to be normal in size, very hard and tough, with nodular cirrhosis, especially on the under surface of the left lobe. The gall bladder was flaccid. About two and a half quarts of thin serous fluid escaped from the peritoneum. The spleen was enlarged and firm. The portal vein was adherent

to structures in the transverse fissure. It was much dilated, and its coats were thick (about 3 mm.) and leathery—not calcified. Its interior was occupied by a firm yellowish granular thrombus adherent at one side to the veins, but not completely obstructing its lumen. The branches of the portal vein through the liver were filled with soft thrombi, closely fitting, and yet capable of being withdrawn. The mesenteric veins were occluded by soft red thrombi. The jejunum for about one foot was adherent to the ascending colon by soft recent lymph. There was acute recent peritonitis over the liver and over this portion of the bowel, which was intensely congested and nearly black, resembling a strangulated intestine. There was no blood in its interior; the mucous membrane was eroded. The walls of the rest of the small intestine were much thickened by œdematous swelling. Several veins near the pyloric end of the stomach were firmly thrombosed. Pleural adhesions existed on each side, and there was effusion into the right pleural cavity. The probable order of events was—(1) cirrhosis of the liver, (2) thrombosis of the portal vein, (3) sudden extension of the thrombosis to the gastric and mesenteric veins, and (4) peritonitis.

Reviews and Notices of Books.

Hygiene and Diseases of Warm Climates. Edited by ANDREW DAVIDSON, M.D., F.R.C.P. Edin., late Visiting and Superintending Surgeon, Civil Hospital, and Professor of Chemistry, Royal College, Mauritius, Author of "Geographical Pathology." Illustrated with Engravings and Full-page Plates. Edinburgh and London: Young J. Pentland. 1893.

SECOND NOTICE.

SURGEON-CAPTAIN DAVID BRUCE, Army Medical Staff, defines Malta Fever as a disease of long duration, characterised by fever, profuse perspirations, and constipation. The relapses which are almost invariable are accompanied or followed by pains of a rheumatic or neuralgic character, and sometimes by swelling of the joints and orchitis. On post-mortem examination there will be found enlargement and softening of the spleen and congestion of the various organs, but no enlargement or ulceration of Peyer's patches, or of the other intestinal glands. A definite species of micro-organism is described as of constant occurrence in various tissues. The author was the first to demonstrate and describe, in 1887, a micrococcus in connexion with this fever, which, under the name of Mediterranean, gastric remittent, and bilious remittent fever, or other synonyms, had attracted the attention of various medical writers. The micrococcus is readily obtained from the spleen by means of cultivation on suitable media, but the only animal found susceptible to the disease up to the present time is the monkey. Inoculated with it monkeys develop marked febrile symptoms and, as a rule, die in from thirteen to twenty days. This fever often runs a very long and monotonous course; soldiers show an average stay in hospital of nearly ninety days, but its duration varies between very wide limits in different individuals. It is rarely fatal; only 2 per cent., and probably less, die. Neither quinine nor any other remedy exercises a beneficial influence upon the fever.

The article on Yellow Fever by Dr. George M. Sternberg affords a good summary of what is known on the subject. Up to the present time it cannot be said that bacteriological observations have demonstrated any "yellow fever germ," although the inference is that the specific infectious agent is some living micro-organism which, under favourable meteorological conditions, multiplies externally to the human body in insanitary localities, where it finds a suitable pabulum for its growth. Carefully written articles on Dengue, by Dr. Andrew Davidson; the Plague, by Dr. Montagu Lubbock; Cholera and Leprosy, by Mr. C. N. Macnamara, follow. The last-named authority would not seem to concur in the views recently put forward by the Commission on Leprosy in their report—viz., that it is not diffused by hereditary transmission, and that the extent to which it is propagated by inoculation or contagion is exceedingly small.

The article by Dr. Patrick Manson on Beri-beri gives a graphic description of the clinical varieties, symptoms, and pathology of this disease. We may remind our readers that we lately reviewed[1] a translation by Mr. Cantlie of Pekelharing and Winkler's work and researches on this subject. Dr. Manson defines beri-beri as a specific endemo-epidemic multiple neuritis of uncertain extent, duration, severity, and course. Mostly confined to tropical and subtropical countries, it is characterised by varying degrees of muscular paresis, muscular hyperæsthesia and atrophy, by anæsthesia and paræsthesia in certain skin areas, and by local or general œdema; it is also attended by a marked liability to sudden death from paresis of the heart, or of the muscles of respiration, from œdema of the lungs, from hydro-pericardium, or from a combination of these conditions. It is upon these lines, after giving a brief account of its geographical distribution, that the author "works up" his portrait of the disease, which is illustrated by woodcuts of its "wet" and "dry" types, of the areas of anæsthesia, and of the position sometimes assumed by the patient in walking (due to shortening of the calf muscles) after partial recovery from beri-beri atrophia. The etiology and the prophylaxis of the disease are very carefully given, attention being pointedly directed to the great importance of diet and the avoidance of malarial conditions generally. The results of the bacteriological work have been too contradictory for any satisfactory inference to be drawn at present. We may here state that Dr. Manson's other contributions to this volume—and notably that on Filariæ Sanguinis—are very good; indeed, we have not elsewhere read any such satisfactory account of the late Dr. T. R. Lewis's discovery and of the very curious and interesting observations and additions that Dr. Manson and others have since made to it. For the detailed history of all that is known regarding this parasite the reader is referred to the article itself, which will repay perusal and would be spoiled by condensation. Tropical Diarrhœa is considered by Sir Joseph Fayrer in a short practical paper, and illustrated by the record of several cases. Dysentery is a conjoint production by Surgeon-Captain D. M. Davidson, I.M.S., and the editor, Dr. Andrew Davidson. The remarks on the morbid anatomy of different forms of the disease and on the nature of the dysenteric lesions are accompanied by a word of caution to the reader not to be too much influenced by theoretical considerations in the study of the pathology of the disease. In the amœbic form of dysentery it is stated that abscess of the liver, or of the liver and lungs, appears in about 50 per cent. of the cases; but we may remark that amœbæ cannot always be found in the pus of cases of hepatic abscess of dysenteric origin, and some observers—Laveran, for example—consider that this negative result may be attributed to the slow progress of the abscesses and death of the amœbæ. Tropical Diseases of the Liver, contributed by Professor Cayley of the Army Medical School, Netley, is a very good article, and is illustrated by a coloured plate showing the condition produced in the liver by impaction of gall-stones in the common duct. The remarks in the concluding paragraph on the importance of a suitable diet for hot climates, as illustrated by the relative immunity of the Hindu and Mahomedan races of India from diseases of the liver, are well worthy of the consideration of Europeans proceeding to, or resident in, that country. Sir Joseph Fayrer contributes articles on Tropical Liver Abscess and Sunstroke. In the former the natural history, semeiology, morbid anatomy, and treatment are first considered, and a brief summary of numerous cases is appended

[1] THE LANCET, Nov. 18th, 1893.

illustrative of the chief points of interest in this disease. Sir Joseph Fayrer gives the result of his own experience of the surgical treatment of hepatic abscess and quotes that of Mr. Godlee. Mr. C. N. Macnamara deals with the subject of Goitre, more especially in connexion with its distribution in India. Dr. Prospero Sonsino of Pisa contributes an exhaustive article on Intestinal, Hepatic, and Portal Entozoa, and associated diseases, which is well illustrated by plates; and an article on Diseases of the Skin in Tropical Climates, from the pen of Dr. Patrick Manson, concludes the volume We regret that we have been unable to review and deal with many of the subjects more fully, but to do so adequately, and at the same time critically, requires, in justice to author and reviewer alike, a larger amount of space than we can afford. From what we have said the reader will perceive that we consider this book on "Hygiene and Diseases of Warm Climates" an excellent and highly useful work.

Outlines of Obstetrics. A Syllabus of Lectures delivered at the Long Island College Hospital by CHARLES JEWETT, A.M., M.D., Professor of Obstetrics and Pediatrics in the College; Obstetrician to the Hospital Edited by HAROLD F. JEWETT, M.D. Philadelphia: W. B. Saunders. 1894.

THE aim of this little book is to assist the student in securing a classified knowledge of the outlines of the subject, which the author believes should be the first step in the pursuit of every branch of knowledge. The book is more especially intended for the use of students, but partly also as a work of reference for practitioners. There are eight sections,—viz., the Female Genital Organs, the Physiology of Pregnancy, the Pathology of Pregnancy, the Physiology of Labour, the Physiology of the Puerperal State, the Child, Obstetric Surgery, the Pathology of Labour, and the Pathology of the Puerperium. The information given under these various headings is well arranged, and the style is clear and concise. Although the book is the work of an American obstetrician, there are so few differences from what is generally taught here that this need not deter the English student from using it as an analysis while reading the larger text-books in common use. It may perhaps seem to many that an abstract of the subject is especially valuable when the student has prepared it himself, from notes of lectures and in the course of his reading. At the same time the power of analysis, of seizing on the really essential facts of a subject—the sense of what may, perhaps, be called literary perspective—is not given to all. There are now so many subjects for the student to know something of that he will almost of necessity fall back on an abstract ready to his hand for want of time, even if he has the power, to prepare one for himself. There are a few points, mostly of secondary importance, on which we do not take quite the same view as the author. Thus in the account of hydatidiform mole, under prognosis it is stated that the mortality is from 10 to 15 per cent. This appears to us an excessive estimate—that is, if it is to be applied to cases that come under skilled observation and management. Under such conditions death is a very rare event. We observe that among the diagnostic signs of vesicular mole the author mentions that the discharge of cysts is rarely noted, which entirely agrees with our own experience. We also see it stated that triplets occur once in 600 or 800 cases. No doubt "hundred" is a slip of the pen for "thousand." The mechanical factors of labour are considered under the somewhat quaint headings of: (1) the Expelling Powers, (2) the Passage, and (3) the Passenger. A useful practical rule is given for ascertaining the position of the spinous process of the last lumbar vertebra when about to measure the external conjugate. It is as follows: "Draw a line connecting the depressions corresponding to the posterior superior iliac spines. The second spinous process above this line is that of the last lumbar vertebra" This information is not always clearly given, even in some of the larger works on midwifery. Special mention must be made of the excellent rules for disinfecting the hands; the methods are described with a precision and attention to detail that leaves nothing to be desired. The second method given by which, according to the author, the hands may be rendered sterile to culture tests is the following: "After thoroughly cleansing the hands and nails with soap and water and a nailbrush, and rinsing off the soap, immerse for two minutes in a warm saturated solution of permanganate of potassium in boiled distilled water, remove the permanganate stain by immersion in a warm saturated solution of oxalic acid made with boiled water; wash with sterilised water; immerse for two minutes in a mercuric iodide or chloride solution, 1 in 500." A solution of 1 in 500 mercuric iodide in glycerine is recommended for lubricating the hands or examining finger. We think the book will be found very useful to the student, and also to the practitioner desirous of refreshing his knowledge or of bringing it up to date.

Text-book of Normal Histology, including an Account of the Development of the Tissues and of the Organs. By GEORGE A. PIERSOL, M.D., Professor of Anatomy in the University of Pennsylvania Pp 439, with 409 illustrations. London: Baillière, Tindall, and Cox. 1894.

PROFESSOR PIERSOL'S treatise is well written, well got up, and illustrated by nearly 400 original illustrations, which, having been made with the aid of the camera lucida or from micro-photographs, present a refreshing novelty. He commences, of course, with an account of the cell. "The structure of protoplasm," he observes, "is now recognised as far more complicated than was formerly supposed, comprising a highly elastic and extensible portion—the spongioplasm—and an interstitial, seemingly less active substance, the hyaloplasm. The active contractility which has been generally credited to the spongioplasm has been recently questioned (Schaefer), since the characteristic amœboid movements of living cells are by some attributed to the changes taking place within the hyaloplasm. ..... Chemically, protoplasm consists of various albuminous substances in combination with a special nitrogenous proteid, *plastin*, together with water and salts." The process of karyokinesis is given in detail, with woodcuts chiefly drawn from those of Rabl-Schiefferdecker, Boveri, and Hertwig, both the text and the illustrations showing how complicated is the process formerly considered to consist only in the division of the nucleus. In the histology of striated muscular tissue, Professor Piersol accepts Rollett's account as the most plausible, but makes no reference to Dr. C. F. Marshall's views on the nature of Krause's membrane, though these afford a good explanation of the return of muscle to its normal length, after it has shortened by contraction—which is otherwise difficult to explain. Two sections are devoted to the consideration of the nervous system, the first dealing with nerve cells, fibres and ganglia, and the development of these structures; the second treating of the central nervous system. In the latter good descriptions, accompanied by excellent illustrations, are given of the cells of Purkinje in the cortex of the cerebellum. As to the different views of Henle, Kölliker, and others in regard to the genetic relation of the spermatozoa to the spermatoblasts, Professor Piersol states that critical study of many specimens has convinced him that the view attributing to the nucleus the formation of the entire spermatozoon is correct; the changes, in brief, consisting of the increase and accumulation of the nuclear chromatin in a manner resulting in the differentiation of the nucleus into two zones—an outer, which stains deeply and is rich in chromatin; and an inner, which is clear

and is devoid of chromatin. "Coincidently with these changes the nucleus escapes from the protoplasm of the daughter cell to take up its position in company with other free nuclei, within the granular remains of the extruded cell-protoplasm. The chromatin then accumulates at the inner border of the dark outer half of the nucleus; from this zone a projection or spine into and subsequently through the inner clear half of the nucleus takes place, which outgrowth is the first indication of the future tail of the spermatic element. As the result of the localisation of the chromatin within the central part of the nucleus the latter now exhibits three zones. An outer clear cap at the forepole, a narrow middle zone filled with chromatin, from which the developing tail fibre extends, and an inner clear area which reaches as far as the hindpole and is pierced by the tail." The further changes are that the outer clear cap becomes the homogeneous head, the middle chromatin band produces the tail and the middle piece and the inner clear zone form the delicate hyaline envelope investing the middle piece and the tail. It will be seen from these extracts that the author has not been content with copying the statements of earlier writers, but has observed for himself. An appendix contains an outline of the methods in common use for preparing, staining, and mounting tissues for microscopic examination.

A Handbook of Obstetric and Gynæcological Nursing. By the late FLEETWOOD CHURCHILL, M.D. Revised and greatly enlarged. Edited by THOMAS MORE MADDEN, M.D., F.R.C.S. Edin., Obstetric Physician and Gynæcologist, Mater Misericordiæ Hospital, &c. With numerous Illustrations. Dublin. 1893.

THIS little book is really the fifth edition of Dr. Churchill's "Manual for Midwives," being considerably enlarged, altered, and partly re-written by Dr. More Madden. The main object of the work is to present a summary of all such information as may prove sufficient for the safe guidance of obstetric and gynæcological nurses, while at the same time the author hopes that students and junior practitioners may find some of the information as to practical details deserving of their attention. We think that in a book more especially intended for monthly nurses and midwives—that is to say, for persons who have usually had a very limited general education—more prominence should have been afforded to the paramount importance of antiseptics, and detailed directions given as to how they may be efficiently employed in attending an ordinary case of labour. Thus, for example, in the chapter on the Management of Natural Labour there is no mention whatever of antiseptics; but the midwife is advised that "the first thing she should do when called to a case of labour is to ascertain whether the presentation be natural or not." She is not told, as we think she should be, that before making any examination her first care should be to thoroughly cleanse her hands and nails, and to disinfect them by immersion in a solution of some efficient antiseptic. On the other hand, in the same chapter, space is given for the illustration of two appliances, one of which at least—a special clamp for compressing the funis—is quite superfluous, to say the least. Surely it would have been well to be content with teaching the midwife how to tie the cord properly, without confusing her by suggesting that a particular mechanical contrivance "may be advantageously substituted for the ordinary ligature."

From the account of the special duties of the monthly nurse it may be inferred that part of her duty is to make a vaginal examination before she sends for a medical practitioner, as we read that in order to decide when to send for a medical man she is to "take into consideration the distance at which he lives, the character of the patient's former labours, the rate of progress of the present labour, *and the presentation.*" The italics are ours. We are aware that some accoucheurs, in order to save their time, do authorise monthly nurses to make an examination before sending for them, but it should be clearly impressed on nurses that it is no part of their ordinary duty to make any such examination unless distinctly ordered to do so by the medical attendant. It is of little avail for the medical man to employ elaborate antiseptic measures as regards his hands when a nurse, whose hands may be anything but aseptic, has already examined the patient. There is a great deal of useful information in the book, but it will be seen that in its present form there are some fundamental points with regard to which alterations are needed.

Grundriss der Histologie für Studirende und Aerzte (Outlines of Histology for Students and Practitioners). Von Dr. BERNHARD RAWITZ. Berlin: S. Karger. 1894. Pp. 284. Mit 204 Abbildungen (with 204 Illustrations).

DR. RAWITZ's work is a description of the various tissues of the body. He has purposely avoided giving any account of the modern methods of preparing and mounting specimens, believing that the interruptions occasioned by such details prevent the student from obtaining such a general view of the subject of histology as this work is intended to present; moreover, he has written another short treatise on microscopic technique to which reference may be made. There is not much novelty—perhaps the space at the disposal of the author did not allow of it—in the description of the various glands, as the salivary glands, the liver, pancreas, kidney, testis, and ovary, but what is given is accurate and clearly stated. Under the heading of Muscle he points out that the sarcolemma of most writers is not a single membrane, but that it is composed of two layers, which are only separated at the point of entry of the nerve into the muscle. The external layer he names, with v. Thanhoffer, epilemma, the inner layer endolemma or sarcoplasm. The former belongs to the connective tissues, the latter is of cellular—i.e., protoplasmic—nature. It is continuous with the septa of Krause, and invests the muscle substance with a layer of protoplasm. The endolemma presents the lacunæ of the lymphatic system. He admits to eleven layers in the muscle substance between two of Krause's membranes. The illustrations are rather roughly done, but are effective.

Outlines of Practical Hygiene. By C. GILMAN CURRIER, M.D. New York: E. B. Treat. 1893.

THIS work is stated by the author to be adapted to American conditions, and to have been undertaken in the first instance at the request of busy practitioners and students to supply the lack of a compendious work upon practical hygiene. The book, however, is scarcely more than a sketch of the subject, and if accurately reflecting American opinions we are bound to say that in many instances they differ radically from our own. Thus, in speaking of kindergarten schools, the author describes these as most useful "for children at either social extreme, where a mother neglects her offspring, whether by force of want and depravity or owing to heartlessness, and a persistent devotion to empty and ephemeral pleasures." In these islands we are accustomed to regard the kindergarten system as a valuable preliminary training for the child in the art of observation; and it is not uncommonly made use of by mothers who have the thorough education of their children most at heart. Of the cold bath the author does not speak very warmly, and considers that even in the robust it is a cause of skin disease. Some of the remarks on the application of water to the ears strike us as quaint, especially that "all water is undesirable in the ears." Although advocating a more liberal supply, the writer is content with a minimum air space of 250 cubic feet per head for school children. Dr. Currier is not an advocate of the

ordinary use of tobacco and considers that even in moderation it is harmful to some; but when "chewed" he thinks that tobacco has a slight antiseptic value. In describing the disposal of sewage, the author states that the sewers may be "allowed to flow into most of our large rivers if this be done advisedly and with due regard for the health of all"; and we note that he advocates the system of carrying the waste-pipes from waterclosets, sinks, and tubs directly into the soil-pipe. In dealing with vaccination he states that "nearly a century ago it was discovered that inoculation of a cow with human small-pox produced on the animal a very mild pustular disease, said also to have occurred independently in cattle and horses, and called 'vaccinia' or 'cow-pox.'" We were under the impression that the identity of variola and vaccinia does not even yet rest upon a sure experimental basis. In conclusion, we think that a fuller description of sanitary apparatus might with advantage have been introduced—an addition which would have materially added to the value of the book.

Politzer's Text-book of the Diseases of the Ear and Adjacent Organs. Translated by OSCAR DODD, M.D. Edited by SIR WILLIAM DALBY. London: Baillière, Tindall, and Cox. 1894.

THIS edition of the eminent Vienna professor's well-known work will be welcomed by those who wish to obtain a complete account of all that is known in connexion with aural diseases. This volume strikes us as being less bulky than previous editions, and this is no doubt due to the judgment of the editor. By this means a more handy and readable book has been produced. The text and index, with paragraphs in small print, extend to over 700 pages, and to the mind of an English surgeon the work would seem to be unduly elaborate, especially in the classification and subclassification of inflammatory diseases. This is perhaps the only charge that can be brought against the volume, for whoever peruses it carefully cannot fail to be struck with the laborious detail, the extensive references, and especially the valuable pathological data, which underlie the clinical remarks and details of methods of treatment.

The anatomy and physiology of each part of the organ of hearing are fully considered, and then follows an enumeration of the diseases to which that special part of the auditory apparatus is especially liable. The indications for treatment are clear and, for the most part, reliable. Excellent and useful articles will be found in this volume on the cerebral complications of ear disease and on some of the principal affections of the nose and naso-pharynx complicating or causing deafness. There is also an interesting article on cholesteatoma in connexion with middle-ear suppuration, a subject often scarcely noted in many text-books of aural surgery. We turn naturally with special interest to Professor Politzer's account and estimation of operations on the drum and ossicula in cases of chronic inflammatory affections of the middle ear, and confess to a sense of disappointment when we find that this experienced authority expresses himself on these matters with such caution that on the mind of the reader the impression must be left that he has not come to a decision as to their value and advisability. Indeed, he expressly states that further experience is needful regarding such operations as extraction of the stapes in chronic middle-ear catarrh. The book is extensively illustrated. Most of the engravings are well executed, and microscopical appearances of disease or of minute points of anatomy are freely introduced. The drawings of the membrana tympani in its various diseased conditions are not coloured and are somewhat diagrammatic, but still they are clear and well illustrate the text. The editor and translator must be congratulated on having done their work well. The text is singularly free from error, and the orthography, with the exception of one or two authors' names, is quite accurate. This book is eminently one for reference and perusal by those who practise aural surgery. We can confidently recommend it, for it contains, as stated by the editor in his preface, all that is known upon the subject.

JOURNALS AND REVIEWS.

The Practitioner. Vol. III., No. 1. January, 1894. London: Macmillan and Co.—The first article in this number deals with the subject of the surgical treatment of pulmonary tuberculosis. It is by Dr. Arnold Chaplin, who shows that there is practically no scope for pulmonary surgery in this disease, either in the case of drainage of cavities or in the more heroic measure of attempted eradication of early tuberculous foci. Dr. Sangster has a practical lecture on the diagnosis of skin diseases; and Dr. L. G. Guthrie describes the pathology and treatment of ingrowing hairs. Dr. Gordon Sharp gives his experience of the use of hyoscine hydrobromate in three cases: two of delirium tremens and one of insomnia. The drug produced analogous effects to atropine, and Dr. Sharp does not consider it to be a safe hypnotic. Dr. William Osler of Baltimore contributes particulars of an interesting case of acute tuberculosis with typhoid symptoms, which he refers to a toxæmic condition. The number contains some excellent reviews and public health articles.

The Journal of Pathology and Bacteriology. Vol. II., No. 2. November, 1893. Edinburgh and London: Young J. Pentland. — The editor writes a brief and sympathetic notice of the late Professor Charcot, who was one of the collaborators of the journal, to which he had hoped to have contributed a paper on Pseudo-Hypertrophic Paralysis. "The Air of Schools" is the title of a paper by the late Dr. Carnelly of Aberdeen and Mr. Faggie. The results of their analysis of the air of schools in town and country districts are of much interest, especially in regard to the determination of micro-organisms in the air examined. The specimens of air were taken at separate times and under various conditions. Dr. Thomas Harris supplements a detailed account of a case of primary malignant disease of the pleura with a thorough consideration of the question of the origin of carcinoma in mesoblastic tissues, which he considers by no means a pathological impossibility. Dr. Lindsay Steven writes on fibroid disease of the heart, a subject which the late Dr. Hilton Fagge brought before the Pathological Society several years ago. The pathological conditions have been fully worked out, but their clinical recognition is still a desideratum. Dr. Steven expresses the conviction that fibroid disease is associated with many cases of angina pectoris. There are three bacteriological papers by Dr. Klein—one on bacterium radicicola, which develops in, or rather constitutes, the nodules which are found on the roots of leguminous plants, and are probably largely concerned in the "fixation of free nitrogen" from the soil. Certain points remain to be cleared up before this latter fact can be fully established. The other papers by Dr. Klein refer—the one to "an acute infectious disease of pheasants," allied to, but not the same as, the grouse disease which he formerly investigated; and a note on a singular infection of food-stuffs by the bacillus prodigiosus. Dr. Henry Chasseaud details his careful experiments on intra-ocular therapeutics, in which he shows that various fluids may safely be injected into the posterior chamber of the eye, chlorine water being the most useful, as it is not only antiseptic but also does not excite any inflammatory reaction. The number also contains notes on pedunculated tumours (one of the intima of the basilar artery, the other of the pleura) by Dr. Hektoen of Chicago; and an account of experimental inoculations of portions of tissue affected with Paget's disease and coccidia by Mr. D'Arcy Power. The part inoculated was mostly the vaginal mucosa of the rabbit, and the effects in the two series of experiments were strikingly similar.

The Dublin Journal of Medical Science. Third Series. No. 265. January, 1894. Dublin: Fannin and Co.—Dr. J. Alfred Scott, President of the Pathological Section of the Royal Academy of Medicine in Ireland, gives in his presidential address, which forms the chief article in this number, a clear description of present knowledge upon the chemical reactions of cells and the subject of immunity. The other article deals with the medical care of children. It is by Dr. H. C. Drury, who pleads forcibly for the study of diseases of children and the importance of their management. The special report of the month is devoted to nervous and mental diseases, and is from the pen of Dr. Ringrose Atkins.

The Asclepiad. Vol. X., No. 39. Third quarter, 1893. Longmans, Green & Co.—Sir B. W. Richardson exhibits in the pages of this quarterly the same fertility and lucidity which render his volumes of such general interest. He is never more at home than when engaged in comparisons of the past history of medicine with its present practice; and the first two papers in this issue are of this character. The one deals with blood-letting, a topic the author has previously treated, and it may be useful to cite the conditions which he enumerates as appropriate for recourse to this measure. They are—"(*a*) In acute spasmodic seizures, as in spasm of croup, in colic, and in angina with symptoms of oppression from distension of the right side of the heart with blood. (*b*) In acute pain, membranous or spasmodic, as in sudden pleuritic or peritoneal pain, or in pain from passage of a calculus, hepatic or renal. (*c*) In acute congestions of vascular organs, as of the lungs or brain, apoplexies. (*d*) In cases of sudden shock or strain, as after a fall or a blow, sunstroke or lightning shock. (*e*) In some exceptional cases of hæmorrhage of an acute kind unattended by pyrexia." The other paper is on Sanitation, Retrospective and Prospective, in which Sir Benjamin Richardson eloquently pleads for the sanitary officer as teacher of the multitude rather than as an official entrusted with compulsory powers, for, he says, "compulsion" is "out of date." Amongst the "Opuscula Practica" there is an excellent reminder of the importance to the race of the watchful care of the pregnant woman; and also some timely and thoughtful remarks on the errors and dangers of the modern examination system. The biographical sketch this quarter is of the Honourable Robert Boyle, F.R.S., whom Boerhaave considered "succeeded to the genius and inquiries of the great Chancellor Verulam." An article on idiosyncrasy and alcohol, some notes of experimental researches and of contemporary literature complete this very interesting number of a most interesting periodical.

The Medical Magazine. Vol. II., No. 7. January, 1894. London: Southwood, Smith, and Co.—We hardly know whether the new style of this periodical is to be considered a gain or not. It has certainly enlarged its scope, and has developed into more of a journalistic form than in its earlier issues, the number of original articles on general topics of interest being reduced and replaced by papers on current events. The first article, by Dr. Samuel Wilks, is upon the Origin of Music, in which the identity of the rhythmical sense, or sense of time, with that of the muscular sense is brought out. A brief continuation of the discussion of "Weismannism" is continued under the general heading of Heredity and Disease; and the publication in Guy's Hospital Reports of memoirs of John Hilton and Edward Cock forms the basis of an appreciative notice of these two Guy's surgeons. Mr. G. Mahomed discusses the Relations of the State and the Doctor, and pleads for the appointment of a class of special medical jurisconsults. Medical Defence, the Report of the Metropolitan Asylums Board, the Army and Navy Medical Departments, and a variety of other matters are touched on in this number, which further contains in its educational supplement lists of the professors of some of the foreign medical schools. The insertion of advertisements on pages forming part of the body of the journal is a practice hardly to be commended.

The American Journal of the Medical Sciences. Vol. CVII., No. 1. January, 1894. Philadelphia: Lea Brothers and Co.—Dr. Maurice Richardson of Boston, in writing upon Appendicitis, of which he has had large experience, states that in certain cases he is still in doubt as to the proper line of treatment, and his own general views have undergone some change with the growth of experience. He is convinced that appendicitis is the cause of more deaths than any other acute abdominal lesion (excluding certain zymotic diseases), and believes the mortality to be even larger than is supposed. His paper travels over several important facts in the symptoms and treatment of the affection, and forms, indeed, a most valuable contribution to the subject. Dr. W. Osler of Baltimore describes the Neurosis following Enteric Fever, known as the "Typhoid Spine"—a subject not mentioned in text-books, to which attention was first drawn by Dr. Gibney of New York in 1889. Dr. C. L. Dana of New York describes a fatal case of chorea in a male adult, in which there was "chronic lepto-meningitis of convexity of brain, hyaline bodies in brain cortex, and slight meningitis of the upper part of spinal cord." Diplococci were found in the meningitic exudation, and their discovery suggests to Dr. Dana the possibility of a microbic origin to the disease. Dr. Keen of Philadelphia commences in this number a record of four cases of Brain Tumour, in three of which operation was resorted to. Dr. R. W. Taylor of New York writes On some Unusual New Growths of the Vulva, and Dr. Adler criticises recent work on Protozoa and Carcinoma, arriving at the conclusion that much described as parasitic is not really so, that no constant or specific organism has been indubitably demonstrated, and that there are strong arguments against a parasitic origin of cancer.

University Medical Magazine. Vol. VI., No. 4. January, 1894. Philadelphia: University of Pennsylvania Press.—Dr. William Goodell has a sad story to tell in his outspoken article on the Great Medical Error of the Day. The subject is that of the modern tendency to refer the minor ailments of women to disorder of the pelvic organs, and many are the instances he quotes of meddlesome and useless or even dangerous local treatment for symptoms due to nervous disorder. The question is akin to that dealt with by Dr. Clifford Allbutt in his Croonian lectures some years ago; but, coming from a professor of gynæcology, the present protest is all the more emphatic. Dr. James Tyson in a lecture on two cases of Croupous Pneumonia expresses the opinion that venesection might be used in this disease with advantage more frequently than is customary. Dr. Howard Fussell writes on Tetany, and Dr. James Wallace on Gonorrhœal Ophthalmia.

The Bristol Medico-Chirurgical Journal. Vol. XI., No. 42. December, 1893. Bristol: J. W. Arrowsmith.—The topic selected by Dr. Greig-Smith for his presidential address at the Bristol Medico-Chirurgical Society was that of Modern Medical Journalism. Amongst other articles may be noted a remarkable series of three cases of Umbilical Hæmorrhage in the same family by Mr. Jas. Taylor, and an account of Cheltenham as a health resort by Dr. J. H. Garrett.

The Birmingham Medical Review. Vol XXXV., No. 185. January, 1894. London: J. and A. Churchill. Birmingham: Hall and English.—We observe that Dr. Saundby, who has for so long and with such success edited this journal, has retired from his office, which is filled by Drs. J. W. Russell and O. J. Kauffmann. The present number contains an article upon Pneumonia by Dr. Simon. He urges the value and importance of restorative and stimulant treatment, but at the same time thinks that venesection might be prescribed more frequently, herein agreeing with Dr. Tyson's views in the current issue of the *University Medical Magazine.* A contribution to Hæmatology of some interest is to be found in Mr. D. Stanley's paper on the Pathology of Leucocythæmia.

New Inventions.

A PORTABLE FORM OF OXY-HYDROGEN LIGHT FOR LARYNGOSCOPIC EXAMINATIONS.

THE value of the oxy-hydrogen light for laryngoscopic examination has always been recognised, but hitherto such lights have generally been fixed upon wall-brackets or standards. The form of portable lantern shown in the illustration has now been for some time in use at the Hospital for Diseases of the Chest, Victoria Park, and was exhibited at a recent meeting of the Laryngological Society of London. It answers its purpose so well that I venture to ask for space in the columns of THE LANCET in order to make it more widely known. It was constructed at my suggestion by Mr. J. H. Steward, 406, Strand, and contains in small space all the requirements of a clinical lamp. It can be carried by the two wooden handles and held by a nurse at the bedside. It is furnished with a cut-off tap by which the light can be put out or restored at a moment's notice. The heat rays are almost entirely absorbed by a water-chamber placed in front of the condensing lens. The lens is so constructed as to furnish a tunnel of light of about 10 in. diameter at the ordinary distance for the laryngoscopic mirror. When fixed on the tripod-stand the lamp can be placed at any height and can also be rotated. The cylinders of gas, strapped together by an ordinary luggage strap, can easily be carried to the bed.

E. CLIFFORD BEALE.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting of subscribers to this fund was held on Friday, Jan. 12th, at the residence of the treasurer, 84, Brook-street, Grosvenor-square, W. Amongst those present were: Sir James Paget, Bart., F.R.S. (president), in the chair, Sir W. H. Broadbent, Bart. (treasurer), Mr. Felce and Mr. France (vice-presidents), Dr. Sidney Phillips and Mr. Edward East (honorary secretaries), Drs. Baines, Bowles, Ince and Eastes, and Messrs. Aikin, Byam, Churchill, Kiallmark, Lynch, Morgan, Page, and Parker-Young. The treasurer's financial statement and the report of the committee were submitted to the meeting, and from them it appeared that during the past year the relief afforded by the fund had, as is usual, been given in the form of money grants to approved cases and as annuities. The income during the year had amounted to £4748, that from investments being £2073, an increase of £9; the donations amounted to £471 14*s.*, and the subscriptions to £1023 17*s.*, giving a total of £1495, as against £1561 in the previous year. Legacies produced £1180—viz., £1000 from the estate of the late Miss M. S. Johnstone, and £180 from that of the late Dr. Charles Hawksley. Expenditure—Grant Department: £1866 were distributed in grants varying from £5 to £20 amongst 170 applicants, chiefly in instalments through honorary local secretaries, or through the agency of the Cheque Bank. Annuity Department: The sum of £2140 was divided amongst 103 annuitants. The recipients of annuities are members of the medical profession, or their widows or daughters, of more than sixty years of age, and are selected by a special committee meeting twice a year to decide which are in the most urgent need of permanent assistance. A great number of the cases are well known to members of the committee from having previously come to the fund for temporary relief and have been placed upon the list of annuitants as age has rendered them eligible; and in the case of very many of the annuitants the annuities they receive are all that stands between them and parish relief. The annuities are £20 each, although eight of them have been increased to £26 a year through the special fund established in 1873. They are derived from the income of invested property, and owing to the large number of legacies which have come to the fund during the last few years the relief afforded in the form of annuities has greatly increased. Thus, during the year 1883 the number of annuitants was 51, and they received £1062, and the number has increased year by year until during the past year (1893) the number of annuitants was 103, who received the sum of £2140. Amongst the annuities which were continued was the "John Morgan" annuity. As was stated in the report for 1892, this fund received and invested in that year the sum raised in memory of the late Mr. John Morgan, F.R.C.S., and the income derived from it (£36 in amount) was during the past year at the disposal of the committee, and was continued to the "widow of a medical man with children to educate," as desired by the subscribers to the memorial. Notwithstanding the large increase in the number of persons receiving annuities, the application from others in need of immediate relief has been much in excess of those for many years, and, unfortunately, the funds available for this purpose, derived from donations and annual subscriptions, have fallen far short of the needs of the committee, for of late many old and liberal suporters of the fund have died, and others, in all parts of the country, have been unable to keep up the amount of their subscriptions. At the meeting in May the committee were compelled to borrow £200 from the annuity department, and at the meeting in October there were absolutely no funds in hand. An appeal by the treasurer brought in £190; but this, added to the donations and subscriptions, was not enough to meet the urgent cases and repay the £200 borrowed. Both grants and annuities are given, as usual, by instalments, which the committee has found from experience to be the only satisfactory method. The committee are pleased to congratulate the treasurer, Sir W. H. Broadbent, Bart., upon the well-merited honour lately conferred upon him, and have to deplore the loss of one of their vice-presidents in the person of Sir Andrew Clark, Bart. Drs. G. Eastes and J. Lowe were elected to supply vacancies on the committee. The resignation of Dr. John Bright was received with regret, and he and Dr. Brett were elected vice-presidents of the charity. Votes of thanks to the chairman of committee, to the auditors, treasurer, and honorary secretaries, to THE LANCET and other medical journals, and to Sir James Paget were accorded and suitably acknowledged. The committee, in drawing attention to the deficiency of funds, mentioned above, would observe that the entire work of the charity is voluntary, printing and stationery alone costing anything, collectors' commission excepted. Every penny subscribed is available for the services of the fund, and they would draw the attention of the profession to the work and utility of the charity, and solicit a corresponding increase in subscriptions. Subscriptions and donations should be sent to the treasurer or to the hon. financial secretary, Dr. Sidney Phillips, 62, Upper Berkeley-street, W.

THE BOLTON INFIRMARY AMBULANCE CLASSES.—On the 10th inst. an interesting assembly of members of the ambulance classes held at the infirmary during the winter months took place in the St. Andrew's Presbyterian School, when the certificates of the successful members were distributed and presentations made to Mr. Patrick, Dr. Johnston, and Dr. Galletly, for professional services rendered to the several classes. After tea had been served there was a miscellaneous entertainment, the mayor of the borough presiding. Subsequently the certificates were distributed and the following presentations made: Mr. Patrick was the recipient of a travelling bag, Dr. Johnston of a table lamp suitably inscribed, and Dr. Galletly of a case of carvers.

THE LANCET.

LONDON: SATURDAY, JANUARY 20, 1894.

PRACTICAL WORK IN ANATOMY.

WE believe that almost every teacher of practical anatomy in England will agree with our statement that the quantity and the quality of the dissections now made by the students in our medical schools are distinctly inferior to those to which teachers and examiners were accustomed some few years ago. A system of chalks, black-boards, and tutorial "cramming" classes has largely supplanted the older and better method of teaching, by which students were supplied with parts and with the assistance of occasional and regular demonstrations by the teacher and his assistants. At this period they were encouraged to make out the main arrangements and relations of the structures of the human body and to prove for themselves what was set down in the text-books. We question whether such advice as that given to a pupil by one of our greatest anatomical teachers in the older generation of anatomists has been lately enunciated. "How shall I get a knowledge of a head and neck?" said the student. "Take this part and my text-book and work steadily according to my directions in that book on that region of the body, and put yourself in a corner of the dissecting-room, so as to work quietly at it by yourself for a month, and what you do not then understand I will explain to you with pleasure." There can be no doubt that such advice, when conscientiously followed, made many more and better anatomists than all the teaching by the modern methods, which rarely aim at anything beyond securing for the student a rapid and cursory knowledge intended for purposes of examination. Teachers apparently consider that there are no future obligations to the student in his later practical studies, or to the practitioner. Nay, the obligation due to the parent, who has entrusted his son to the school authorities for a thorough and practical training, is also greatly overlooked in this respect. This deplorable deterioration in the teaching of anatomy so far as real dissecting-room work is concerned may be accounted for by causes which, however beneficial in some ways, are disastrous to practical work and injurious to the mental acquirements that should be derived from the proper study of human anatomy. A practitioner has in after-life to carry into his daily medical and surgical work the broader facts, the lessons, and even the methods which have been, or ought to have been, inculcated in the course of his practical anatomy. One of these deteriorating causes is the present system of examinations of the Conjoint Examining Board in England. The first, second, and third examinations are split into so many numerous parts that the student has now practically to pass his examinations in nine quarterly instalments, and therefore only a very small percentage of the students of any year are at a given time at work at exactly the same subject. If the professor of anatomy wishes to supervise and teach his class thoroughly by lectures and special demonstrations, and to place out his dissection subjects so as to secure efficient practical work, he will be met with the difficulty that among his students there are some who are still learning their chemistry, whilst others are reading materia medica, and a third set perhaps have not passed in elementary anatomy and physiology or in biology, as the case may be. The students of a given standing, twelve or fifteen years ago, were nearly always engaged on the same branches of study, and consequently there was more friendly rivalry among them, and a much greater amount of thorough and honest practical work was done by students working side by side than is now the case. Classes for the past two or three years have been divided up into little detached portions in each year, the individual student being only anxious to be drilled in the subject he is required to pass within the next three months. We believe that this is the experience of all medical teachers in London, and it could readily be altered if the authorities of the Conjoint Board would insist on a year's scientific and non-technical training of the student before entering on his more strictly medical studies; and, as at all Universities, such a year should be included in the curriculum of a medical student's education. As we have pointed out in former issues of THE LANCET, the arrangements of the subjects included in the first year's course, as laid down by the Conjoint Board, are most unsystematic and unsatisfactory, for they permit students to take up their subjects in the most diverse and inconsequential manner. The examinations in these subjects, so far as they are technical, are also, as we have before explained, mere makeshifts, and quite untrustworthy guides to the teachers, the pupils, or the parents. The examinations in chemistry and physics cover almost the whole ground embraced by the two subjects. In elementary anatomy and biology the candidates are examined for ten minutes only on work which it has taken six months to prepare; and how can anyone examine thoroughly in the few minutes which are devoted to the *viva-voce* examination in these subjects?

The second factor which has done so much harm to practical work in dissecting is the great advance which has lately been made in morphological anatomy, for speculation and hypothesis will always be more attractive to the beginner than will be the drudgery of sheer hard work. The applied and descriptive anatomy of the human body has correspondingly lost interest with students. Human anatomy, which ought to be known by every practitioner in the medical art, is quietly but surely being relegated by our best students and by many examiners to a subsidiary place in medical studies. Many of our most intelligent medical pupils can adequately discuss the homologies of the transverse processes of the vertebræ while they do not know the position of the tendons around the wrist or ankle-joint, or the relations of the aortic arch. We may be training a race of more or less scientific anatomists, but we are not insisting on such a curriculum of study and such an examination as will produce in the future well-grounded, thoroughly practical, and efficient medical men. Dissections of the deeper regions are seldom made by the student now, and he learns his text-book statements by a process of "cramming" to which diagrams and carefully-prepared museum specimens always lend themselves as efficient aids. He was formerly taught to know and then to use his knowledge, and now he is encouraged only to learn for the purpose of reproducing his information at the next examination. As Mr. THOMAS COOKE truly says in his recent plea for practical work in anatomy: "If there is one point of all others which it is imperative to insist upon as to the kind of anatomy required by the medical man it is

emphatically that it should be a practical and particularised as opposed to an abstract and generalised kind of knowledge. The one question with the medical man is to know, in the most matter-of-fact sense of the term, what is evident and tangible in one single species—man himself." It is growing in evidence year by year that anatomical teaching is becoming less and less concerned with the dissection of the human cadaver and that the student is led more and more to learn, parrot-like, the statements and descriptions in his text-books. Human anatomy must be studied technically from a human standpoint, for most medical students are intended to be medical practitioners, and the morphological interests may be referred to those scientific anatomists who concern themselves with other vertebrates, and who in the course of their lectures apparently treat of an ideal evolutionised human being of their own construction. Such anatomists have no experience of the requirements of those who are destined for medical practice among our world-kin.

THE paper by Dr. HUGH R. JONES of Liverpool on the Perils and Protection of Infant Life read at the Royal Statistical Society on Dec. 19th, 1893, is a most able and exhaustive one and well deserves the Howard Medal which it gained. The paper, in dealing with the historical part of the subject, shows that as far back as 1601 the first English Poor-law was passed which provided for the support of children by their parents or grandparents, and in their default it established a system of child apprenticeship. In 1747 the law stepped in to protect these children from the cruel treatment to which they were subjected, justices being empowered to discharge parish apprentices for ill-usage. In 1792 an Act was passed by which the duty of prosecuting masters for ill-treatment was laid upon the parish officers. Various other Acts for regulating the ages of chimney sweepers were passed in 1788, 1834, and 1840. The first Factory Act was passed in 1802; it prohibited night work, provided for the cleanliness of factories and for the clothing and education of apprentices, limited their number, and restricted the hours of work to twelve. The second Factory Act, passed in 1819, regulated the employment of children in cotton mills and factories. After alluding to more recent Acts, notably the Infant Life Protection and the Prevention of Cruelty to Children Acts, Dr. JONES passes on to the definition of the word infant, which he uses as comprising all children under one year, though he includes statistics relating to children under five years, the perils of child life under this age being almost identical with those of infant life. Statistics are then given showing the mortality of infants according to the Registrar-General's reports, and Dr. JONES dwells upon the mortality from zymotic diseases, which is given as 20 per cent. of the infant mortality, 35 per cent. being of infants under the age of one year and 76 per cent. under the age of five years. The mortality from small-pox is shown to have declined since 1851 in consequence of vaccination being better performed and its being obligatory, the decline not corresponding to the decline in the general death-rate, which has been attributed to better sanitation. After dealing with other zymotic diseases Dr. JONES passes on to diarrhœa, which is shown to be excessively fatal during the first year of life, and especially during the earlier months. Improper feeding is given as the chief cause of this excessive mortality, and on this important point much statistical and other information is given. After dealing with dietetic, parasitic, constitutional, and local diseases the ill-defined causes of death are dealt with, and the following summary is given of the perils of infant life from a study of the mortality statistics of the Registrar-General: "1. The danger of contracting zymotic disease, with risk of life or of permanent injury—e.g., blindness from small-pox, kidney disease from scarlet fever, tuberculosis from measles. 2. The injury to health and the frequent death of infants who are badly fed—i.e., with improper food—or who are insufficiently fed. These dangers induce diarrhœa, digestive disorders, and the wasting diseases of infancy. Deaths from convulsions and dentition must be considered in this connexion. 3. The risk of diseases of the respiratory system, depending upon overcrowding and exposure to cold, and upon the debility due to privation, bad feeding or disease—e.g., rickets, specific fevers, &c. 4. Simple neglect—e.g., blindness from the untreated ophthalmia of infants."

Dr. JONES next deals with the important subject of deaths from violence, to which even infants are subject, though, as is shown, the majority of cases are those rather of accident and neglect than of wilful intention to murder or of manslaughter. The rates of infant mortality from violence between the years 1871-80 for a few towns is given, with the following interesting results. That for all England is 2·37 per 1000; that for Liverpool, 14·00; Manchester, 2·41; Birmingham, 10·92; Newcastle, 4·25; Kidderminster, 2·87; Oldham, 0·93; and gradually decreasing ratios for Bolton, Halifax, Blackburn and Carmarthen. The detailed analysis of deaths from violence for the same period gives the following:—

Fractures	121	Drowning	334
Gunshot	2	Suffocation...	14,956
Cuts, stabs	15	Others	2,685
Burns, scalds	1,102	Murder	1,029

The subject of suffocation of infants in bed and its connexion with drunkenness is dealt with at length. Statistics of inquests show conclusively that deaths from suffocation occur most frequently on Saturday nights or Sunday mornings, while the largest number of apprehensions for drunkenness in Liverpool occurs on Saturday. The persons apprehended and locked up cannot, of course, be guilty of suffocating infants in bed; but simultaneously with these apprehensions an equal, if not larger, number of drunken people able to stagger home are permitted to do so. Eventually they tumble into bed, where the wife is too often in an equally drunken state, and so the suffocation of the unhappy child who is between them is only what might be expected. As has, however, already been noticed in THE LANCET,[1] a mother was convicted of the manslaughter of her infant under these circumstances and was sentenced by Mr. Justice DAY to imprisonment with hard labour. We are somewhat surprised that in so exhaustive a paper as this we can find no allusion to the late Captain CORAM and the Foundling Hospital. It was the sight of living infants left exposed in the streets which met the philanthropist's gaze on his way to the City and moved him to provide a shelter for them which afterwards expanded into the Foundling Hospital.

Passing on to the more serious crime of wilful murder or homicide the statistics of the Registrar-General show that in the fifteen years 1863–87 the deaths from homicide in infants

[1] THE LANCET, Dec. 2nd, 1893.

under five years of age were 1748 males and 1777 females, making a total of 3525; of these 3355 were of infants under one year. Dr. JONES remarks: "The light estimation in which infant life is held cannot be more forcibly expressed than by the mere quotation of these figures." This is undoubtedly true, but what is the remedy? As has been repeatedly urged in these columns from time to time, a proper regard for infant life should be shown from its very commencement by insisting upon the registration of every birth, whether still or live. Dr. JONES does not refer to this point, which unquestionably has much to do in determining the value of infant life. The causes of excessive infant mortality, and therefore the perils of infant life, are thus summed up:—"1. Prenatal causes leading to death from premature birth, from congenital malformation, and from hereditary diseases. 2. Insanitary conditions leading to excessive mortality from zymotics and diseases of the respiratory system. 3. Social circumstances—e.g., position and education of parents &c.—leading to the neglect of children and consequent excessive mortality from diarrhœa, convulsions, and atrophy. 4. Crime and wilful neglect.

Dr. JONES is one of the honorary assistant surgeons to the Liverpool Infirmary for Children. It is evident that he has not only utilised to the fullest extent the opportunities there afforded him of studying his subject, but also much leisure time and many other sources of information. His labours will be certain to produce good results.

MR. D. AINLEY, the medical officer of health of the borough of Halifax has issued a report upon the epidemic of small-pox which occurred there from the middle of March, 1892, to the end of September, 1893, the most marked incidence falling in the month of April, 1893. During the whole period 513 cases were admitted to hospital, with 44 deaths, or a mortality of 8·5 per cent. The *vaccinated* cases numbered 425, with 8 deaths, or 1·8 per cent. mortality; the *unvaccinated*, 88, with 36 deaths, or 40·9 per cent. mortality. There were 2 cases in revaccinated persons, one having been "revaccinated inefficiently five years ago," the other "revaccinated thirty-four years ago." As regards age-incidence, of the vaccinated group no cases occurred under five years of age, 0·9 per cent. from five to ten years, 20·2 per cent. from ten to twenty, 34·3 per cent. from twenty to thirty, 26·8 per cent. from thirty to forty, and 17·6 per cent from forty and upwards; whilst of the unvaccinated 56·8 per cent. were under five years of age, 17·0 per cent. between five and ten years, 5·6 per cent. between ten and twenty, 5·6 per cent. between twenty and thirty, 6·8 per cent. between thirty to forty, and 5·6 per cent. between forty and upwards. Another table shows that the mortality rates per cent. of attack amongst the vaccinated were *nil* at ages five to ten, 1·1 at ten to twenty, 0·6 at twenty to thirty, 0·8 at thirty to forty, and 0·6 at forty and upwards; whereas amongst the unvaccinated the mortality rate was 40·0 per cent. at age "under five years," 11·7 per cent. at five to ten; 20·0 per cent. at ten to twenty; 60·0 per cent. at twenty to thirty; 100·0 per cent. at thirty to forty; and 80·0 per cent. at forty and upwards. Mr. AINLEY also analyses the cases with respect to their type, classifying them under the three heads of "discrete," "semi-confluent," and "confluent," with most instructive result. Thus of the whole number (425) of the vaccinated, 329 had discrete attacks, 58 semi-confluent, and 38 confluent; whilst of the vaccinated (88), only 9 had discrete attacks, 26 had semi-confluent, and 53 confluent attacks. If, however, the eleven persons who were "vaccinated after they had caught the infection" be deducted from the unvaccinated class, the 10·2 per cent. of discrete ases in the latter is reduced to only 5·6 per cent. Lastly, dealing with age periods, it is clearly shown that the severer forms of small-pox occurred in but small proportion among vaccinated persons up to thirty years of age, whilst amongst the unvaccinated the preponderance of severe cases was marked at each period. The report contains also a succinct narrative of the outbreak and of the measures employed to deal with it. The valuable aid afforded by notification (which was first adopted in Halifax in 1882) in affording early information of cases is pointed out, and the hospital provision is described. This latter soon proved to be inadequate, and during the summer of 1892 tents were erected in the hospital ground, subsequently replaced by new wards. At first the authorities were without proper means of disinfection; but in November, 1892, this was also remedied, and, failing quarantine, persons dwelling in infected houses were required to adopt certain precautions, or were kept from work for fourteen days. One feature of the outbreak was the house-to-house visitation (April–June, 1893) made by Dr. DRURY, the public vaccinator, at the request of the Sanitary Committee in "Caddy Field and Siddal districts, which were nearest to the hospital, the committee supplying calf lymph for the purpose *ad lib.* 1714 families were thus waited upon, with the result that 305 primary vaccinations and 464 revaccinations were effected before the end of June. When Dr. DRURY began to visit there were 84 infected houses in the above-named districts, afterwards 60 houses (including 76 cases and 4 deaths) were invaded, *but there was not one case in any house where vaccination had been accepted.*" Mr. AINLEY notes the paucity of grave sequelæ to the attacks of small-pox, only two cases suffering from serious eye complications, both in unvaccinated persons. But many patients suffered from troublesome boils and abscesses which retarded convalescence. As regards prognosis of an attack he rightly lays much stress upon the individual's antecedent habits and physical condition. The report contains other interesting matter—e.g., a demonstration that insanitary conditions have little to do with the propagation of the disease, and also some conclusions as to the best means of coping with epidemics, and the value of vaccination, which it is urged should be in the hands of the sanitary authority.

Annotations.

"Ne quid nimis"

A MEMORIAL TO SIR ANDREW CLARK

THERE are several proposals abroad for a memorial to Sir Andrew Clark. Nothing can be more natural and satisfactory than the general wish to see such a memorial, or even more than one; but it is very desirable that there should be a good understanding between those who are from different points of view promoting such projects. Without such an understanding the forces available will be weakened. The Royal College of Physicians of London

would seem to be the most fitting body to lead the profession in an expression of affection and respect for its late President. The public will have different views as to the way in which any fund raised from the public ought to be used. Undoubtedly the London Hospital and the medical school connected with it has a strong claim to consideration, but it is surely premature to resolve, as was apparently done at a meeting held at the Horse Guards and presided over by the Duke of Cambridge, that the fund raised should be devoted wholly to the London Hospital. We trust that a little time will be taken for conference between the different promoters. As we have already announced, the institution of a memorial to their late President and the question of the form which it should take will be submitted to the Fellows of the Royal College of Physicians by their present President, Dr. Russell Reynolds, at the next general meeting of the Comitia on Jan. 25th. The Commander-in-Chief, as reported in the daily press, seemed to anticipate that the College would decide to commemorate Sir Andrew Clark by a portrait. Perhaps we may be allowed to suggest that in this case a portrait would not constitute the aptest memorial, and that the institution of a prize for work calculated to practically advance the interests of medicine in some direction would meet, we believe, with the more general approval of the profession.

THE MEDICAL MEDIATOR IN SICILY.

LITTLE less than a year ago, when commenting on "The Physician in Parliament,"[1] we showed how the thoroughly unsound banking system of Italy had, to the great benefit of the public, been exposed in the "Camera dei Deputati" by Dr. Napoleone Colajanni, one of the medical staff of the University of Messina, who is a member of the Italian Legislature. He it was who led to the suppression of the Banca Romana and to the revelation of the long series of scandals in the conduct of that and other favoured "banks of emission"—a service vouchsafed to healthy finance in the peninsula and to the economic rehabilitation of the people. Since then a visitation even worse than loss of credit on the Bourse has befallen Italy—the outbreak of something like civil war in her largest and richest island. The political journals for the past fortnight have teemed with narratives of the collisions between the Sicilian *adscripti glebæ* and the authorities, the wrecking of town halls and the destruction of official—chiefly fiscal—records, the assassination of mayors and sheriffs, the temporary triumph of the forces of disorder, and finally the proclamation of the island as being in a state of siege. Here again the same physician who drew attention to the rotten state of Italy's banking system and to the political "septicæmia" of which it was at once the cause and effect has signalised himself as the wise and far-seeing reformer, who finds in the turbulent scenes enacted in Sicily the violent expression of a deep-seated and chronic social malaise. Last year, in fact, when the first low mutterings of the brewing storm were audible in the island, Dr. Colajanni made a memorable appeal to the then Prime Minister on behalf of the downtrodden peasantry and the miserable serfs of the sulphur mines, and warned him that for the inhuman maltreatment of the proletariat there is apt to come a day of reckoning hardly less inhuman in its methods, and that unless remedial legislation was introduced, and that early, there was in store for the middle and upper classes in Sicily a very rude awakening. His words, though at the time they fell on deaf ears, have within a few weeks been verified to the letter, and such has been the social upheaval of *contadini* and *solfatari*, combined under their *fasci* or clubs, that an entire army corps is now quartered among a population of little more than 3,000,000, and civil has been replaced by martial law. General Morra di Lavriana, commander-in-chief in the island, is a kind-hearted as well as a capable soldier, and has wisely begun with conciliatory measures, and while making arrests and imposing restrictions wherever necessity dictated he has sought the counsel of men whose knowledge of the people and their hardships gives them a special right to be heard. Dr. Colajanni is the first of these "civil assessors" whom he has called to his side, and so impressed has he been with their first exchange of views that he has sanctioned the issue of a manifesto to the rebellious Sicilians, if drawn up by the hand and signed by the name of Napoleone Colajanni alone. The compact thus made has been duly kept; the manifesto, so drawn and so signed, has been diffused throughout the turbulent districts and the socialist chiefs have acquiesced in its terms; not a few of them have emerged from the lurking-places whence they gave the *mot d'ordre* to the rioters, and now all is in a fair way towards tranquillity in the island. Meanwhile the terms of the manifesto include a distinct statement to the effect that a Royal Commission will at once prepare the ground for remedial legislation and start the movement, now seen to be imperative, for the amelioration of the condition of the Sicilian peasantry. Special enactments to this end will be the primary business of the Italian Chamber of Deputies at its next meeting; and if the result should prove that which all parties desire—viz., a large and liberal concession of economic and social rights to the wretched tillers of the soil and minions of the sulphur mines—the thanks of Italy in general, and Sicily in particular, will be due—not for the first time—to the presence in her Parliament of an able and philanthropic physician—in short, of "the medical mediator."

[1] THE LANCET, Feb. 25th, 1893.

THE DISPOSAL OF THE DEAD.

WITH reference to a leading article in THE LANCET of Oct. 14th, 1893, on the respective merits of cremation and burial as discussed at the Birmingham meeting of the Church Congress, a correspondent calls our attention to the fact that the Church of Rome has pronounced against cremation. This fact alone must cause burial to be continued as the mode of the disposal of the dead for the members of that Church. This preference for burial is shared by many members of the Established Church, as well as by those of other religious denominations, and so, while admitting all the advantages of cremation, it is perfectly clear that burial must continue as the mode of the disposal of the dead in this country for many years to come. The deaths in England and Wales amount annually to 550,000 in round numbers, this varying considerably in different years, but with an upward rather than a downward tendency, for though the death-rate decreases the total population does not; in other words, therefore, we must make provision for the disposal every year in our various English and Welsh cemeteries and burial-grounds for the disposal of considerably more than half a million corpses. Our correspondent, who has studied very attentively the details of burial, informs us that the cost of funerals has been very greatly reduced among the upper and upper middle classes. It is found that the expenditure of £10 to £15 will allow of everything being completed in good taste and reverence, but without any excess. These sums included the usual fees for the opening of the grave, officiating minister, &c., but not the cost of the grave itself. This, however, is not a heavy item, ranging from £1 upwards, while burial in public or common graves can be secured for a few shillings. For the burial of children the expense is less, and £5 ought to be regarded as the maximum. Keeping in view the fact that burial space for more than half a million bodies annually must be ready to hand, the

lesson obviously is that there should be no undue monopoly of grave space either by means of strong, durable coffins or walled graves or vaults. It is unnecessary now to attack burial on the grounds of its expense in funeral paraphernalia. Funeral reform is an accomplished fact in most parts of the kingdom, and the funerals of the past generation are almost as extinct as the dodo. One reform is, however, still needed—viz., the substitution of a simpler and more perishable coffin for the present oaken ones with brass handles and mountings which serve only for show. The Jews have long set an example in this respect, the bodies of members of that community from the highest to the lowest being buried in plain deal coffins; but, as Mr. Seymour Haden has shown, wood of any kind is unsuitable for coffins. The "earth-to-earth" coffin, made of solidified or hardened pulp, has had a fair trial and is said to be thoroughly suitable for its purpose, being strong enough to convey the body from the house of death to the grave, but giving way in a reasonable time after its deposit there. Medical practitioners are not infrequently asked for advice as to the details of a funeral, and the time has fully arrived when this very necessary reform should be pressed upon all those who prefer burial as the mode of disposal of their own and their friends' bodies.

"LIQUID AIR."

NOT since the days of Faraday have the popular lectures at the Royal Institution proved more attractive and interesting than those recently delivered by Professor Dewar on liquid air, before an audience comprised largely of juveniles. In spite of the difficulties, not to say dangers, which attend the prosecution of research at temperatures approaching the zero of absolute temperature, Professor Dewar, with the assistance of Mr. Lennox, has been remarkably successful in converting laboratory experiments into popular lecture experiments. This success has been mainly due to the invention of a vessel for storing and manipulating exceedingly volatile fluids like liquid oxygen and liquid air, by which it has become possible to prepare and preserve large quantities of the liquefied bodies employed in the research. Broadly speaking, the vessels so used consist simply of glass tubes, flasks, or bulbs, into which the liquid air is placed, provided with an exterior glass jacket, which is exhausted of its air as completely as physical and mechanical processes permit. In such vessels the liquefied gas can be kept for hours, and the economy and ease of manipulation are greatly improved. By means of the intense cold Professor Dewar has been able to produce, combined with an exhaustion not hitherto attained, he has proved that mercury distils, as do phosphorus and sulphur, at the ordinary temperature when the vapour pressure is under the millionth of an atmosphere. The increasing indisposition shown by the chemical elements to combine with one another as the absolute zero is approached was well illustrated in the experiment in which some liquid oxygen was cooled to – 200° C. On inserting a glowing piece of wood into the vessel above the liquid it refused to burst into flame. Again, another interesting experiment was that of immersing an electric pile composed of carbon and sodium into liquid oxygen, when almost immediately the electric current ceased, consequently on the suspension of chemical action. Some idea of the temperature of liquid air is given by running on to the surface some absolute alcohol, which, after rolling about in the spheroidal state, suddenly solidifies into a hard transparent ice, which rattles on the sides of the vacuum test-tube like a marble. On lifting the solid alcohol out by means of a looped wire the application of the flame of a Bunsen burner will not ignite it. After a time the solid melts and falls from the looped wire like a thick syrup. It is hardly necessary to add that the work of investigation in this field proceeds slowly, but Professor Dewar does not despair in the future of adding further data to our knowledge of the properties of matter near the zero of absolute temperature. In this connexion, therefore, his lecture to-day (Friday) before the Royal Institution on the Scientific Uses of Liquid Air will reawaken the interest and curiosity of physicists and chemists.

"DR. BELL'S LINIMENT."

AT Edinburgh, in the Court of Session on the 9th inst., Lord Stormonth Darling gave judgment against Dr. Robert Bell, of Lynedoch-street, Glasgow, in two actions brought by Mr. and Mrs. Thomson, to recover sums advanced by them to enable the defender to manufacture and sell a patent medicine invented by him, called "Dr. Bell's liniment," or "Ertell's liniment." Instead of producing a fortune, the sale of the patent medicine was a failure. Dr. Bell was called upon to refund the money advanced, and a decree was given in favour of the pursuers for certain amounts and expenses.

FORTHCOMING INTERNATIONAL SANITARY CONFERENCE AT PARIS.

IN accordance with the announcements made by the delegates of the French Government both at Venice and at Dresden, an International Sanitary Conference has now been convened at Paris with a view to completing the scheme which has for its object to prevent the introduction of cholera into Europe and to stay its spread if introduced. The main portions of the scheme were dealt with under the Venice and Dresden conventions; but the pilgrimage to the holy places in Arabia are looked upon as constituting one of the greatest sources of risk both to Egypt and to Europe, and neither of these conventions deal with this matter. Then, again, British India is naturally regarded as a centre whence cholera is diffused, and a large mass of pilgrims travel regularly from Bombay to Jeddah and Mecca. The French Government have appointed a strong delegation for the Paris Conference. It includes a French Minister, a representative of the Foreign Office, M. Monod, the head of the Public Health Department of France, and experts such as Dr. Brouardel and Dr. Proust. England has consented to take part in the conference, and both the Home Government and that of our Indian Empire will have to be strongly represented, for the occasion is one that involves questions that are of vital importance, not only in relation to the native population of India, but also to the public health of the mother country and her dependencies.

ASTASIA-ABASIA.

A CASE said to be one of astasia-abasia is published in a recent number of the *New York Medical Record* by Dr. W. C. Weber. The patient was a Russian aged twenty-five years who had been in the United States only six months. Previously to going thither he had been in the habit of consuming as much as sixteen ounces of alcohol daily, but insisted, in spite of this confession, that his personal habits were quite correct. A few days before admission to hospital he had experienced a sensation of giddiness, became entangled in the coils of some red-hot wire with which he was working, fell down, and sustained various more or less severe burns. For the proper treatment of these he was kept in bed, but, to his own surprise as well as that of others, when he was permitted to leave his bed he was found to be unable to stand. Even when supported by two men he was unable to walk. While lying or sitting, however, he was able to carry out any ordinary movement, and to exhibit a considerable degree of muscular strength. There was complete analgesia from the toes to a point an inch or two above the pubes. Tactile and thermal sensibility were normal. The knee-jerk was completely lost,

but no other signs of a morbid condition were discovered. Dr. W. C. Weber evidently has some doubt as to whether this case can be correctly described as astasia-abasia. If regard is paid to the meaning of the term only, it is apparently descriptive of the condition as regards the inability to stand or walk. The case, however, differs from all others described under the same title, so far as we are aware, in the fact that the knee-jerk was lost. Considering the habits of the patient, the possibility of the condition being one of alcoholic neuritis, with some functional element superadded, must be borne in mind; but this does not throw much light on the case, which must be regarded as an interesting and obscure one.

AWARD OF THE RIBERI PRIZE.

ONE of the "blue ribbons" of medical distinction in Italy is the Riberi Prize, so called from the late Professor Alessandro Riberi, the celebrated Piedmontese surgeon who founded it. It is open to competition every five years, and its value is 20,000 fr. (£800). The competitors are of all nationalities, the subject must be one of purely medical interest, and "original research" is a *conditio sine quâ non* of the competition. Of the works sent in, three were declared by the adjudicators to be worthy of the prize—one by a Frenchman, another by an Italian, and the third by a German. Among these the prize has just been awarded "per prevalenza di merito" (for preponderance of merit) to a physician of the second-named nationality, who turns out to be Dr. Camillo Golgi, Rector of the University of Pavia and Professor of General Pathology in that school. His subject was "Sulle Febbri di Malaria" (On Malarial Fevers), and his essay, soon to be made *publici juris*, will, it is stated, be found to enhance the honourable reputation he has already won in that field.

THE AFTER-CARE ASSOCIATION.

THE After-Care Association, whose purpose is the succour of poor female convalescents on their discharge from lunatic asylums, held a meeting last Monday, at 83, Lancaster-gate, the residence of the Earl of Meath, their president. Sir B. W. Richardson pointed out to the meeting the immense good that the Association had been able to do, even with so limited a yearly income as £400, and appealed to all superintendents of asylums to endorse the value of such work, and so help by their powerful recommendations to secure for the Association wider public support and facilities for extending their useful labours. This is, we believe, the only charity of the kind in the United Kingdom, and its practical utility in confirming in their convalescence the subjects of treatment in asylums is undeniable. The secretary, Mr. Thornhill Roxby, will give all information in answer to inquiries addressed to him at the offices of the Association, in the Church-house, Westminster.

DEATHS FROM STARVATION.

IT is no merely scientific interest which attaches to the report which has just been issued by the Home Office on the number of deaths from starvation occurring in London during the period of a year. We may recognise in it the first step in the practical treatment of a social evil as long-standing as it is from its very nature obscure and evasive. The report in question deals with thirty-one recorded cases in which the cause of death was ascertained by investigation in a coroner's court. On perusing it one fact is at once evident—namely, that starvation pure and simple plays but a subordinate part among the conditions preceding death. It far more commonly appears as an aggravation of pre-existing disease and is thus only secondarily accountable for the fatal issue. A certain proportion indeed of the cases in which the only recorded illness was hunger might with equal truth be classified among disorders of nutrition. Such are six deaths in infancy from insufficient or improper feeding. Pure and simple starvation is the verdict in only four cases, two being those of aged people, one of a man aged fifty to fifty-six, and one of an infant of twelve months. It is further noteworthy that in almost no instance had parish relief been sought either by or for the sufferer. In one case, that of a man aged ninety, it was obstinately objected to. This is one feature in the official return from which it is possible to derive some encouragement. A not unnatural desire to retain the privacy of home, however humble, and the mastery, sometimes unwise, of one's own actions renders many of the poor very unwilling to relinquish the bare disorder of their solitary lives for the comparative comfort of the workhouse, with its needful and inseparable restraints. Such prejudices, however unjust, do not soon die, and it is therefore all the more necessary that their fallacious character should be proved. The influence of neighbours and parish officials alike may be profitably exerted in this direction. In very many instances, moreover, out-door relief is practicable, so that such a term as absolute starvation becomes under the circumstances hardly distinguishable from voluntary neglect. Another ground of hope is to be found in the fact already stated, that disease in most of the cases quoted coöperated with want in the work of dissolution. The effect, therefore, though a lesson in precaution, was not starvation.

TOUTING TELEGRAMS.

A PRACTICE appears to have recently grown up which we wish to unequivocally condemn. It is that employed by the proprietors of certain preparations—doubtless often excellent things in themselves—to bring their goods under the immediate notice of the profession by telegraphing to well-known physicians and surgeons a reference to the paper or journal where some favourable notice of the same has appeared. In these days we recognise that it would be ineffective to protest against many developments which a few years back would have been held to be—to speak mildly—flagrant breaches of good taste; but the annoyance which this particular form of touting may cause to many medical men is so acute that we consider it imperative upon us to point out the fact; and that not only on behalf of the medical man, but as a caution to the advertiser who may feel tempted towards this method of casting his bread upon the waters. Many physicians and surgeons are compelled, at some juncture or other, to treat their telegrams as private communications, and to arrange, during even a brief absence from home, to have them forwarded at once to them, wherever they may be, or even brought to them by hand at considerable inconvenience and expense. Let the enterprising advertiser consider whether a telegram transmitted to a medical man under such circumstances is likely to induce the recipient of the telegram either to look up the reference or use the article.

ANTI-CHOLERAIC INOCULATION.

WE have received the following communication from M. Haffkine:—"Anti-choleraic inoculations continue to occupy all my time, and the process has now been applied to about 16,000 persons. I try to work on as large a scale as possible, because it is impossible to know beforehand in what part of the country cholera will make its next appearance. I append the names of the places where inoculations have been freely made up till now: Agra, Alligarh, Lucknow, Delhi, Sanawar, Karsauli, Dagshai, Patiala, Rajpoorah, Chirat, Jhansi, Simla, Jatagh, Rawal-Pindi, Murree, Abbottabad, Peshawur, Sangrur, Nowshera, Naini-Tal, Almora, Ranikhet, Dworahat, Kainur, Pauri, Sakniana, Mussa Gali, Srinagar (Garhwal), Tehri, Mussoorie, Dehra Dun, Hardwar, Lahore, and Meean Meer. In all these localities it has been attempted to make the inoculations upon persons who are living in precisely the same environments as their uninoculated fellows; that is

to say, I have selected half of a regiment, of a school, of a prison, or of a village for treatment. A record of the names, social position and surroundings, symptoms which appeared, &c., has been carefully kept of each case, with most minute details, and copies of these records have been given to the medical officers in these localities; and it is from these gentlemen that I hope to receive clinical observations upon the subjects of operation when next an epidemic appears. The constitutional differences displayed by man with regard to cholera are so large that no experience gathered from one, two, or ten individual cases would give even the most general result; the probability being that all the ten selected persons might be constitutionally incapable of being affected by the disease in the recognised manner. On the other hand, operations on animals on account of the particularity of the symptoms which result, are always open to discussions. The results of experience now placed before the eyes of the medical service in India will bring about, I hope, in the near future a direct revolution in our ideas of the nature of cholera and the means of combating the disease."

MIDWIVES' REGISTRATION ASSOCIATION.

WE have received from the honorary secretaries, Dr. Boxall and Mr. Rowland Humphreys, a circular announcing to the profession the formation of an association with the above title, consisting only of registered practitioners, both in general and obstetric practice. The object of the association is to secure the coöperation of all such practitioners in an attempt to obtain legislation such as shall secure the proper education, registration, and supervision of midwives. It is feared that if such an association is not formed and supported by the profession the education and control of midwives may fall into non-professional hands, with the effect of perpetuating the present inefficiency of midwives and causing constant collision with the interests of the general public and of the medical profession. The first list of members includes between fifty and sixty gentlemen. The following is the list of those constituting the executive committee:—Dr. F. H. Alderson, Dr. Watt Black, Dr. R. Boxall, Dr. Champneys, Mr. De'Ath (Buckingham), Mr. Freeborn (Oxford), Dr. W. S. A. Griffith, Mr. Edmund Hale (Chew-Magna, Bristol), Dr. Handfield-Jones, Dr. Herman, Mr. Rowland Humphreys, Dr. A. D. Leith Napier, Dr. Schacht, and Dr. G. Danford Thomas. We trust that in any efforts to promote the objects of the association care will be taken to make it clear that the midwife is to act only in natural cases, and that in the event of any departure from the normal, either as regards mother or child, she is to call in the assistance of a duly qualified medical practitioner.

THE DIFFUSION OF SMALL-POX.

SMALL-POX continues to oscillate in the principal towns affected, and the oscillations are mostly governed by the period of incubation of the disease; that is to say, the rise and fall in the number of fresh attacks are fortnightly. Last week was one of rise as compared with the previous week. In Birmingham the new attacks rose from 27 to 48, in Bristol from 6 to 36, in West Ham from 10 to 13, in Oldham from 5 to 10, and in Bradford from 12 to 25. There were at the same time some instances of fall; thus, at Walsall 20 fresh attacks were recorded, against 28 in the previous week. Amongst other places infected fresh cases occurred last week as follows: Handsworth, 4; Worcester, 2; Aston Manor, 8; Chadderton, 2; Wakefield, 7; Hull, 4; Middlesbrough, 2; besides a number of isolated attacks, as, for example, at Leicester, Willesden, Enfield, Nottingham, Manchester, Batley and York. News of small-pox also reaches us from Aberavon, Caldicot near Chepstow, and a few other places. In Bristol the increase is largely attributed by Dr. D. S. Davies, the medical officer of health, to the fact that a number of cases are extremely mild. These cases are either not recognised at all, or they are so trivial that those affected move about amongst persons whilst suffering from the disease. Most of these individuals have been well vaccinated in infancy and are said to suffer no inconvenience from their attacks, which go unnoticed by the sanitary authority until their less protected fellows have been infected. In five families attacked last week the disease is said to have singled out, with characteristic accuracy, the unvaccinated members of the families in question, and the number of unvaccinated infants attacked has been a noticeable feature. In reporting these matters Dr. Davies refers also to the growing practice of certain practitioners who, by making one single small puncture, fail to give adequate protection against the disease. The points adverted to by him, especially as to the influence of mild attacks going unrecognised, are of importance, especially as regards the view that isolation and detention will, apart from vaccination, suffice to control small-pox. The number of cases daily under isolation by the Metropolitan Asylums Board has varied from 80 to 90, except on one day, when they fell just short of the former number. At Halifax the epidemic, which may be termed that of 1892–93, has apparently come to an end; Mr. Ainley's report upon it is dealt with in another column.

AN UNNECESSARY EXHUMATION.

SOME extraordinary proceedings in connexion with the death of an infant are recorded as having taken place during the last few days at Brentwood, Essex, reflecting upon the treatment pursued by Mr. Cloëte Smith, the medical attendant. As Mr. Smith was not only exonerated from all blame, but commended for the splendid manner in which, under most adverse circumstances, he had performed an admittedly difficult operation, it is difficult to conceive upon what grounds the Home Secretary gave the order for the exhumation of the child over whose body an inquest was held on the 16th inst. The facts of the case, as far as they were elicited at the inquiry, are simple. On Jan. 1st the child of Mr. Lawrence Petre had an attack of convulsions attributed to teething and Mr. Smith was hurriedly sent for. When he arrived the convulsions had ceased, but the child's breathing was so bad that he at once administered hypodermically a dose of apomorphine to induce sickness. As this and subsequent injections produced no beneficial effect Mr. Smith pronounced tracheotomy to be absolutely necessary, and with the consent of the parents he performed the operation with a pair of dressing scissors, the instruments for which he had sent not being forthcoming. The wound was kept open by means of the scissors until a proper tube was available. The child died on the following morning and was interred in the Roman Catholic Cemetery at Brentwood on the 5th. Death was certified as being due to "teething convulsions, subsequent paralysis of the respiratory muscles, œdema of larynx and lungs." Mr. Petre not being satisfied with the cause of death, communicated with the coroner, and the coroner having communicated with the Home Secretary an order for exhumation of the body was obtained. Mr. Grogono and Mr. Francis of Stratford were deputed to make a post-mortem examination, and at the inquest stated that death was consistent with the certificate given, and that the operation of tracheotomy had been admirably performed. The jury at once returned a verdict in accordance with this testimony, and added a rider to the effect that, although the treatment appeared to have been severe, yet that it was warranted under the circumstances. They emphatically declined to add that the inquiry was justified, as was suggested by Mr. Petre's solicitor. Evidently, therefore, in the opinion of the jury the inquiry was totally unnecessary. That such

an inquiry should ever have been held is incapable of explanation so long as the allegations made by Mr. Petre to the coroner are regarded as privileged and not divulged. Though pressed to produce this document, the coroner refused to do so, and the public remain ignorant of the reasons which led the Home Secretary to order the exhumation. Mr. Petre's solicitor said that his client was satisfied with the result of the inquiry, but what is to compensate Mr. Smith for this attack upon his reputation, for the annoyance he must have suffered, and for time and money lost? Mr. Smith will have the sympathy of every member of the profession.

INFLUENZA IN THE DOUBRUGHA.

A CORRESPONDENT, writing from Kustendji on the 5th inst., states that influenza is still very prevalent in that part of the world; but the mortality arising from the disease is small, at least so far as his practice is concerned. Lung complications have been severe in some cases—pneumonia, pleuro-pneumonia, and bronchitis in adults, and broncho-pneumonia in children; gastric catarrh also has given much trouble, as well as neuralgia of the facial nerves. For this last symptom he has found the exhibition of a combination of phenacetine, exalgine, and antipyrin, accompanied with aperient treatment, to be beneficial. In aged people heart failure has been rather pronounced, and has been effectually combated by cardiac tonics, stimulants, and a full supply of nutritious diet. The weather in the Doubrugha has been extremely severe.

BRITISH MEDICAL BENEVOLENT FUND.

WE desire to call the earnest attention of the profession at large to the figures laid before the subscribers to the British Medical Benevolent Fund by Sir William Broadbent, their honorary treasurer, at the annual general meeting. An analysis of the income for the past year from all sources shows a lamentable falling-off in the number of subscribers, while the applications from the necessitous for aid have been more numerous than ever. The report of the committee, with their treasurer's statement, is given in another column, and explains, in a manner that we do not attempt to improve upon, the obvious reasons why the charity ought to receive immediate support, and we sincerely trust that this will be the fortunate issue of their words and ours. That such work should be crippled for the want of more general recognition is an occurrence that we deeply deplore.

FATALITY AT A XYLONITE WORKS.

THE fatality which occurred on the premises of the British Xylonite Company on Dec. 29th, 1893, appears to have been due, according to the evidence of experts at the inquest held on Tuesday last, to the dropping of a hot plate of the hydraulic press, which contained the xylonite in course of manufacture, in such a way that a current of inflammable vapour was established, which, finding its way to a gas jet, instantly ignited and set fire to sheets of the finished material lying close by. The "pressman" was therefore overcome by the fumes and suffocated—a conclusion, at any rate, arrived at by the jury. Some of our readers may remember that we undertook some experiments with this very material,[1] which is known also as celluloid, with the view of ascertaining how susceptible to sudden combustion it was under the influence of heat of increasing intensity, as it had been some time previously reported that certain serious risks had been involved through the wearing of articles (buttons, hair-pins and combs) composed of this substance. While our investigations led us to report that celluloid was highly inflammable, yet we had no reason for concluding that it ever proved so spontaneously; at the same time we urged upon manufacturers the desirability of rendering it less inflammable by the incorporation of deterrent materials. It appears that xylonite or celluloid, which is made from especially prepared tissue paper treated with nitric and sulphuric acids, and worked into a dough with camphor and spirits of wine, and subsequently pressed into sheets, is declared by Government experts not to be an explosive. In spite of this pronouncement we agree emphatically with the rider added by the jury—viz., that the manufacture and storage in large quantities of substances such as xylonite, which are specially dangerous and liable to cause fire, should be placed under regulations and supervision with a view to securing protection to the workpeople and the general public, while exposed lights in rooms (here the electric light would be a remedy) where such material is being made up should in all cases be prohibited.

[1] See THE LANCET of March 5th and 26th, 1892.

THE OPIUM COMMISSION.

THE Indian papers contain, as might be expected, a great deal about the proceedings of the Opium Commission in India and the evidence given before it. There has been, of course, much evidence adduced on both sides of the question, but it cannot be concealed that the weight of testimony, so far from being favourable to the anti-opium movement, has been against it. The general feeling seems to be that the case of the anti-opium party has broken down. The general tendency of the evidence is to show that the use of opium in moderation is harmless and, under certain conditions, even distinctly beneficial, and that any attempt to prohibit its use would be unadvisable, and might lead to serious opposition and possible disturbance. It is not denied that the abuse—that is to say, the immoderate use—of opium may, and occasionally does, give rise to evil consequences; but instances of the kind are relatively rare and have been greatly exaggerated. The mass and weight of the evidence are favourable to the soundness and reasonableness of the policy of the Government of India regarding opium. The number of instances in which the drug is immoderately used is insignificant compared with the immoderate use of alcohol in this and other countries, and as regards the prejudicial effects of opium on the races of India, they are not to be compared with the baneful results, moral and physical, of alcohol witnessed elsewhere or as occasionally seen among the natives of Bengal or India itself.

DEATH OF A DISTINGUISHED PHYSICIST.

SCIENCE has sustained severe losses recently through the deaths, in some cases at an early age, of several of its well-known leaders. Notable instances in medicine, chemistry and botany have been recorded in the columns of THE LANCET during the present winter, and now, according to the *Kölnische Zeitung*, physical science has just lost an able investigator in the person of the distinguished physicist Professor Hertz, of Bonn, at the early age of thirty-six. Professor Hertz's investigations dealt exclusively with the relations between light and electricity. In 1865 Professor Clerk Maxwell maintained that light, electricity and magnetism are all affections of the same medium; that light is an electro-magnetic phenomenon and that its laws can be deduced from those of electricity and magnetism. These views were closely studied by Hertz, with the result that he eventually was able to prove experimentally that electric waves, like light waves, are transverse to the line of motion of the wave and that they require a specific time for transmission. In further experiments he showed also that the electric waves followed the ordinary law of reflection. The phenomenon of electric refraction was similarly demonstrated, as was also the existence not only of optical waves of electricity of the well-known minuteness of

waves of light, but similar ones measuring several metres or even kilometres in length. Thus Professor Hertz's researches led to no less important a result than the establishment of the intimate relations existing between light and electricity. They won for him deserved renown, and the scientific world unanimously approved of his appointment, in succession to the celebrated Clausius, to the chair of Physical Science at Bonn, which, alas, he was destined to hold but a very short time. During the time he occupied this high and distinguished position he continued to prosecute his researches with that skill and energy which distinguished him, and in 1890 the Royal Society awarded him the Rumford medal for his discoveries in connexion with the subject of electro-magnetic radiation.

CASE OF LITHOPÆDION.

DR. OKER BLOM reports in *Duodecim*, a Finnish medical journal, a case of lithopædion which was followed by normal pregnancy. The patient was a woman forty-two years of age, whose fourth pregnancy ended in pains for three days without any expulsion. After a time a tumour the size of a head could be felt in the abdomen. Three years later she again became pregnant, and in due course was delivered of a healthy male infant; the tumour, however, remained, and as the abdominal walls were very thin, its outline could be distinctly felt, the right hand with its fingers as well as the left hand being made out without difficulty; the two forearms were flexed at right angles to the elbows and were fixed, but the humeri could be moved in the shoulder-joints. The uterus presented the usual characters of the organ in multiparæ.

THE SALE OF UNFIT FOOD.

THE appeal from the decision of the stipendiary magistrate of Brighton in the case of Blaker *v.* Tillstone came on for hearing on Jan. 11th before the Lord Chief Justice and Mr. Justice Day, by which it was sought to reverse the decision of the magistrate, who had convicted the defendant and fined him 40*s.* for having in his possession for sale meat unfit for human food. The counsel for the defence argued that inasmuch as the defendant, a sausage maker, had no personal knowledge that the meat which he had in his possession was unwholesome, he was not liable under Sections 116 and 117 of the Public Health Act, 1875. The Lord Chief Justice pointed out that under this Act power was given to destroy the property of a person without summons or notice, and the object of it was that people should not be exposed to danger by eating and drinking poisonous articles. To hold that a person might go on selling meat injurious to health if personal knowledge were not brought home to him would render the Act nugatory; it was unnecessary that there should be positive proof of personal knowledge. Mr. Justice Day concurring, the conviction was affirmed.

A NOTIFICATION CHARGE: SMALL-POX OR ACNE?

AT the Police-court, Kidderminster, an interesting case under the Notification Acts has been recently heard. Two medical men, brothers, Mr. James H. Martin and Mr. John S. Martin, medical officers of the Kidderminster Medical Aid Association, were charged with not duly notifying a case of small-pox to the sanitary authorities. The proceedings were instituted by the Town Council. On Oct. 13th a young man called at the surgery, and was seen by one of these gentlemen, who regarded him as suffering from a cold. On the 17th he called again, and both the practitioners saw him, and having regard to the early history of the young man, and the absence of the symptoms which almost invariably accompany small-pox, they regarded the case as one of acne. The young man had been to Birmingham where there was small-pox. Lest there should be any mistake in the diagnosis, precautions were taken by the Messrs. Martin. The case was seen by one or both of them on the 13th, the 17th, and the 27th. Their diagnosis of acne was strongly supported by Mr. Oliver Pemberton of Birmingham. On Oct. 31st Mr. James Martin was called to see a brother of the patient. He met the sanitary inspector, who thought the case to be one of small-pox. Mr. Martin concurred, and he then reported both cases to be small-pox. The other defendant, however, adhered to the acne view of the case. Particulars as to temperature are not given. We should be grateful to the defendants for particulars of the malaise of the patients before the eruption. The counsel for the defendants had no difficulty in showing their perfect *bona fides*, and in pointing out that the Act only required medical men to notify when they were satisfied as to the diagnosis. After a statement by the counsel on both sides the case was, with the full approval of the bench, withdrawn.

LANDLORD AND TENANT.

A CASE recently heard before Baron Pollock is likely to exercise an important influence on the relations of landlord and tenant by fixing upon the former an amount of responsibility which has up to the present been repudiated. It was stated by the plaintiff (the tenant) that in consequence of a complaint about the drainage of the house in the autumn of 1892 the sanitary authority served a notice upon the defendant. The workmen sent to repair the drain left it standing open for three weeks. The wife of the tenant and four children were taken ill, three of the latter with scarlet fever and one with diphtheria. Two of the children succumbed; and it was alleged that in consequence of the illness of the wife the business which was carried on upon the premises had suffered considerably. Although it was contended for the defence that the agreement which created the tenancy cast no duty upon the landlord to look after the drains, that in what was done there was no proof of negligence, and that the mischief which had happened was not the result of negligence, the jury awarded damages to the plaintiff. We have always contended that it is as much the duty of the landlord to guarantee the state of the drainage as of any other portion of a house before letting it to a tenant; but too frequently the question of drainage is passed by altogether. We are therefore glad to note this case as distinctly recognising in this respect the responsibility of the landlord.

THE FATE OF UNVACCINATED CHILDREN AT LEICESTER.

THE price of defiance to vaccination and vaccination laws is being paid heavily at Leicester. But for the peculiar mental constitution of the sanitary authorities of that town, some sense of responsibility for the deaths which have occurred would be unpleasantly present; for the blows of simple truth fall heavily on them. The facts are appalling in their simplicity. True, they relate to children to a larger extent than adults; but we will not allow ourselves to believe that the cry against the authorities is altogether unheeded. The situation is fast ceasing to be one in which the Local Government Board can connive and become a party by acquiescence. With such mortality from any other cause the facts would be investigated by a coroner, and questions of manslaughter would obviously arise. Let us look dispassionately at the facts we published last week. Of 281 cases of small-pox 126 were unvaccinated. We concede, of course, that this leaves 155 who, though vaccinated once, had taken small-pox; but what are the vital facts of the case? Of the 126 unvaccinated patients no less than 83 were under 10 years of age, and in 9 of these the disease was fatal, whereas there was no instance of small-pox occurring in a vaccinated child under 10 years of age; and of the 155 cases of the disease occurring in persons, vaccinated indeed, but not revaccinated, there were no deaths. If there is any logic

which will acquit the sanitary authorities of the responsibility of these 83 cases under 10, and of the 9 deaths among them, we should be glad to have it pointed out. We do not say anything of disfigurement or of other possible sad consequences to those who have survived. We shall perhaps get a little further light on this subject. Meantime we urge on the attention of the Government the cruel results which a neglect of the vaccination laws is causing. If the President of the Local Government Board does not feel equal to asserting his authority, it is not too much to hope that the Home Secretary will think it a case justifying his interference. Death and disease on such a scale from lead-poisoning or phosphorus would certainly not fail to excite his efforts to find a remedy; and in this case he has a remedy at hand and one that is absolutely reliable.

ACROMEGALY AND BI-TEMPORAL HEMIANOPSIA.

A CASE of this nature is recorded by Asmus in *Graefe's Archiv*, and an abstract of the paper appears in a recent number of the *Revue Générale d'Ophthalmologie*. The patient was a man sixty-three years of age, who presented the characteristic features of the disease—large hands and feet, hypertrophied lower jaw, lips, tongue and nose. There was also blindness in the temporal field of vision on each side, with diminution of the remaining fields. The skin had deposits of pigments in it, and numerous warts. The writer ascribes the visual condition to a hypertrophied pituitary body. The visual acuity was diminished and there was evidence of commencing atrophy in both optic nerves.

LONG WAITING IN THE OUT-PATIENT ROOM.

IN *Sala's Journal* attention is called to the fact that a "paying" patient was kept waiting for four hours with other persons in the waiting-room of one of the London hospitals during a recent very cold day when the snow was on the ground. This ought not to happen. We are not sorry that the patient was a "paying one." Possibly "paying" patients have no business in a hospital at all. They certainly help to swell the inordinate number of out-patients and so to prevent prompt attention to proper cases.

THE INVALID CHILDREN'S AID ASSOCIATION.

WE print in another column a letter from Mr. Holmes, the chairman of the committee of the Invalid Children's Aid Association, expressing a hope that some of our readers may be sufficiently interested in the work of the association to proffer practical help. We heartily endorse Mr. Holmes's wish, for the work of the charity, to which he is giving his energetic and enlightened assistance, appeals to us as admirably directed. There is always something particularly pathetic about disease in childhood, and we conceive that this chiefly arises from the fact that it is generally felt that the small sufferer has not been the cause of his own troubles; rather they have been entailed or thrust upon him by the vices or ignorance of his statutory guardians, and being there are confirmed to him by the same causes. For the helplessness of childhood is very complete, while ill-directed efforts to assist it are frequently as prolific as total neglect in the production of sad results; nor must it be forgotten that many affectionate and intelligent parents are absolutely precluded by their circumstances and surroundings from doing their duties. Therefore the primary aim of the Invalid Children's Aid Association to find for each of its children a personal friend ready to give to it, as far as circumstances may permit, "personal service, doing for it or getting done for it everything that experience, common-sense, and kindness may suggest," goes to the very root of the matter. It is providing the child, who is especially unfit to fight his own battles, with a champion; and providing his guardian, whether ignorant, neglectful, or overworked, with an intelligent adviser, ready to back his words by his deeds. We repeat that we cordially endorse Mr. Holmes's wish that he may find among our readers many ready to help him.

SANITARY PRECAUTIONS IN AMERICA.

DR. ALBERT GIHON, Medical Director of the United States Navy, has recently reprinted in pamphlet form his address to the Section of Hygiene and Demography of the Pan-American Medical Congress, over which he presided. In it he claims for the American naval and military establishments that they have both taken due hygienic precautions in the case of their men, who are consequently cleanly, healthy, and well-behaved; while he arraigns the civil authorities as still purblind to the necessity for organised and intelligent sanitary development, somewhat pungently likening the hurried precautions taken by city fathers when cholera is in the air to "groping for succour only under the flash-light of a pestilential visitation." For it is not great and elaborate measures to ward off attacking epidemics that Dr. Gihon thinks are so much called for in the States, as simple regulations for the assurance of some amount of public immunity from common diseases always prevalent and domestic, and their enforcement. Spasmodic tentative provisions in emergencies he describes epigrammatically as attempts to discover "motes" from abroad, to the neglect of "beams" at home. And then he proceeds to point out the beams unsparingly and with illustrative detail a little too exact to constitute pleasant reading. Infective diseases, tuberculosis especially, he considers to owe their spread to a general uncleanly carelessness which permits the chances of infection to lie around on all sides, though their originating source may have been "the fetid, pestilential torrent" of immigration. Dr. Gihon makes his point, if he makes it with unnecessary vehemence. No one can read his pamphlet without seeing that many of the American conditions of life conduce to the spread of disease, and that so far from excessive precautionary measures being consequently taken such measures are notably absent.

GLYCOSURIA IN ASSOCIATION WITH PERIPHERAL NEURITIS.

IN the last number of *Brain* Mr. Davies Pryce contributes a paper containing a clinical account of three cases of patients whose urine contained sugar, together with an examination of some of the peripheral nerves post mortem. During life all three patients had symptoms pointing to the existence of neuritis of the peripheral nerves—viz., ataxy, weakness, loss of knee-jerks and sensory disturbances. The condition of the muscles, either as regards bulk or electrical condition, does not seem to have been investigated. Vaso-motor and trophic disturbances were present in the feet, consisting of an erythematous œdema and ulceration rather suggestive of that which occurs in association with tabes dorsalis, and in all of them, besides the nerve changes, there was found to be present also a considerable degree of vascular degeneration. The posterior tibial nerves were those in which the changes characteristic of neuritis were chiefly present, and Mr. Davies-Pryce accounts for this by a concurrent degeneration in the posterior tibial artery, which, he says, "is perhaps the one most liable of all the arteries to atheromatous degeneration." This statement, we think, requires confirmation. It is unfortunate that an examination of the spinal cord could not be obtained in two of the cases. In the case where the cord was examined no change apparently was found except a granular condition of the nerve cells in the anterior horns. Considering the fact that cases of tabes have been described in which sugar was present in the urine, and considering also that changes in the peripheral nerves are not uncommon in

association with posterior sclerosis and with such symptoms as were present in some of these cases, an examination of the spinal cord would be necessary before these cases could be regarded as pure diabetes accompanied with changes in the peripheral nerves and without the lesions characteristic of tabes.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. A. Martin, *privat-docent* in Midwifery and Gynæcology, has been accorded the rank of Professor.

Bologna.—Dr. Taruffi, Professor of Anatomy, has retired with the rank of Emeritus Professor. Dr. Sabbatini has been recognised as *privat-docent* in Materia Medica and Pharmacology.

Florence.—Dr. Fano of Genoa has been appointed to succeed Dr. Luciani as Professor of Physiology.

Harvard.—Dr. Collins Warren has succeeded Dr. Cheever as Professor of Surgery. Dr. W. Townsend Porter of St. Louis has been appointed Assistant Professor of Physiology.

Naples.—Dr. V. Gianturco has been recognised as *privat-docent* in Pathological Anatomy.

Pisa.—Dr. Bertelli has been recognised as *privat-docent* in Anatomy.

Prague (*Bohemian University*).—Dr. J. Deyl has been appointed Extraordinary Professor of Ophthalmology.

Rome.—Dr. L. Luciani of Florence has been appointed to succeed the late Professor Moleschott in the chair of Physiology. Dr. Bongfigli has been recognised as *privat-docent* in Mental Diseases, and Dr. Melle as *privat-docent* in Dermatology and Syphilography.

AT a meeting of the Convocation of the University of London on the 15th inst. the report by the annual committee to Convocation was adopted. With regard to the conferment of degrees by a limited company, to which the attention of the committee was recently directed, it was recommended that Convocation should watch the question in the interests of the University. It was stated that the vacancy caused in the number of Fellows by the appointment of Lord Herschell as Chancellor had been filled by the Crown appointment of Sir William S. Savory, F.R.S., to be a Fellow of the University.

WE are indebted to the courtesy of a correspondent for the information that Lieutenant R. E. Liston, who was unfortunately killed recently at Warina, was the son of Colonel John Liston, late of the Bengal Staff Corps and grandson of the celebrated surgeon, Robert Liston, F.R.S.

THE George Henry Lewes Studentship has been conferred by the trustees on Mr. J. W. Pickering, D.Sc. The appointment is tenable for three years at Cambridge, London, or any continental university.

WE regret to learn that Mr. Walter Rivington, F.R.C.S., is at present suffering from a Pott's fracture, the result of a fall during the recent severe weather.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—At a recent meeting of this society the following members were balloted for, and elected officers and councillors for the present year:—President: Frederick Canton. Resident Vice-Presidents: R. H. Woodhouse, Ashley Gibbings, and A. W. Barrett. Non-Resident Vice-Presidents: F. H. Balkwill (Plymouth), W. E. Harding (Shrewsbury), and George Henry (Hastings). Treasurer: S. J. Hutchinson. Librarian: W. A. Maggs. Curator: Storer Bennett. Editor of Transactions: Edward Lloyd-Williams. Honorary Secretaries: Cornelius Robbins (council), J. F. Colyer (society), and Clayton Woodhouse (for foreign correspondence).

THE LANCET
Special Sanitary Commission
ON
PUBLIC HEALTH MEASURES AT SOUTHAMPTON.

PART II.[1]

THE most urgent, and probably the most costly, problem which must at once be solved is that of the drainage of Southampton. Like so many other places, this town is the victim of half measures. Something has been done, and what has been done appears to have been very well done; but in round figures it amounts to this, that there are in Southampton 65,600 inhabitants, and efficient drainage is only provided in the districts where there is a population of not more than 30,000 persons. The dwellings and streets of more than half the population are badly drained. The better quarters of Southampton, where the wealthier people live and where there are less overcrowding and less dirt and poverty, are the best drained. It is pleasant to serve the rich and the influential sections of the community as well as possible, and, of course, the wealthy quarters of a town should not in any way be neglected, but it is the duty of a sanitary authority to consider also the poor, the overcrowded districts, for there the death-rate will be highest and epidemics more prevalent. Southampton is built on a promontory, with the river Itching on the east and a bay formed by the Southampton Waters on the west. The district overlooking the bay, comprising, on the one side, the High-street and its immediate neighbourhood, and, on the other side of the bay, what is known as West Southampton, is, on the whole, efficiently drained. Along the shore of the bay an iron intercepting sewer has been built, which receives by natural gravitation the sewage from this favoured district. Passing between the bottom of the High-street and the Pier this sewer reaches the town quay. Here there is a vacant space close by the row of old cannons which command the Southampton Waters. The spot is familiar to all visitors, who generally go there to admire a handsome and well-preserved cannon made during the reign of Henry VIII. Under the town quay there are two reservoirs measuring 100ft. in length, 60ft. in width, and 10ft. in depth. These are now utilised as precipitating tanks. At a short distance from the reservoirs a box charged with ferrozone is introduced into the sewers. The sewage in passing gradually washes the ferrozone out of this box, which is filled three times a day, a small stream of water falling upon the ferrozone and preventing it from consolidating. This hastens and facilitates the precipitating process accomplished in the tanks. Here also are two of Shone's pneumatic ejectors. The smaller is of 360 gallons capacity; it is placed below the tanks and raises the sewage from a lower-level sewer into the tanks, and when the sludge has been extracted from the tanks it raises it up into an iron sealed main, in which it is forced forward to the destructor works. The other and larger ejector is of 700 gallons capacity, and it is employed to raise and discharge the clarified effluent from the tanks into the Southampton Waters. The outfall is immediately in front of these tanks. It has not, however, been carried out far enough to reach the deep-water currents, a defect which could be altered with comparative facility. The sludge raised from these tanks travels along the main road, passing behind the docks and round the promontory, till it reaches the borders of the Itching river and is delivered at the corporation wharf.

On this spot the corporation has built its refuse destructor, which commends itself to particular notice. Under the direction of Mr. William B. G. Bennett, the borough engineer and surveyor, the problem of dealing with town refuse in the most advantageous manner possible has been very ably solved. The destructor has six compartments, three on each side of the fire. Carts are driven up to each compartment and their contents emptied into the furnace. In each compartment from eight to eleven tons of garbage can be discharged and burnt in a day. The products of

[1] Part I was published in THE LANCET of Jan. 6th.

combustion pass through a 30 horse-power multitubular steel boiler placed in the main flue, which abuts on the furnace shaft. This is a fine piece of brickwork, 160 ft. high, and of 6 ft. inside diameter. As the corporation wharf is composed of loamy clay of recent and insecure formation it was necessary to make an artificial foundation for this chimney, consisting of a bed of concrete 30 ft. square and 10 ft. thick. By the utilisation of the heat generated in the destructor all the power necessary for raising the sewage and the sludge is obtained free of cost—that is to say, no expense is incurred for the purchase of fuel. The fact that the raising of sewage by artificial means involves a continuous outlay for coals to obtain the required power has very materially militated against the employment of any such contrivance. Consequently, engineers have persisted in seeking to drain by gravitation, even where the ground was too flat to be suitable for the purpose. Hence many sewers, in different towns, are not self-cleansing, and become a source of constant nuisance and danger to the population. On the other hand, efficient gravitation can always be secured, even on perfectly flat soil, if at short intervals the sewage can be raised or pumped up by artificial means. Whether, however, the sewage is raised by an ordinary pump or by a pneumatic ejector or elevator, power must be obtained to work this machinery. Then the cry of expense is raised. Sanitary authorities stand in fear of the irate rate- and tax-payer, who, to the detriment of municipal progress, is the sole municipal elector. Thus it happens that in many cases sewers have been deliberately built when it was known that they would never work satisfactorily. Southampton, however, has now shown us a way out of the difficulty. It is only necessary to combine the question of dealing with the town refuse with that of raising the sewage where there is not sufficient fall for drainage by gravitation. The sweepings from streets, and the contents of the dustbins supply fuel enough to keep the engines of the sewer works going. The steam generated in the boilers heated by the refuse destructor is employed to drive a couple of engines of 31½ indicated horse-power. They compress air into two large receivers, and this compressed air is conveyed by a five-inch iron main to the town quay, where it works the two ejectors already described. On the road, and nearer the destructor, there is a third ejector worked with an air pressure of 12 lb. to the square inch. It raises sewage a height of eighteen feet. This one ejector used to cost £120 per annum for coal, but now the refuse destructor economises this outlay. It raises sewage from a low-level sewer into a higher-level sewer. The air pressure pipes, made of cast iron, are laid down for a distance of a mile to reach the ejectors at the town quay and supply the ejector which raises the sludge with air pressure equal to 40 lb. per square inch. The other ejector used for the clarified effluent only requires a pressure of 10 lb. to the square inch; this, however, is not all. The dust destructor not only provides power enough for the wants of the borough of Southampton, but there is some to spare to assist the neighbouring district of Shirley. Beyond the railway station of Southampton West, the Shirley Local Board of Health have constructed precipitating tanks; and, though at a distance of two and a half miles from the Southampton destructor, they receive air under pressure of sufficient force to work two ejectors, which raise all their sludge and force it along sludge mains to the Southampton corporation wharf. This sludge main could not be laid without several sharp curves; nevertheless, the sludge has been transmitted the whole distance without any impediment arising. Further, the power generated by the destructor is employed not only to deal with the Southampton and Shirley sewage, but it also serves several minor purposes. It works a small 6 horse-power engine, which cuts up and prepares the fodder for the forty horses the corporation employs for its dust-carts. The steam generated in the destructor also sets in motion a dynamo of 150 volts, which gives electric light throughout the works. These consist of two arc lamps of 3000 candle-power each and twelve incandescent lamps of 16 candle-power each.

Iron tumbler-carts of two cubic yards capacity collect all the refuse, &c., of the borough, and it is emptied into the destructor furnace; but a portion of this rubbish and the road-sweepings are discharged into tanks close at hand, where the sludge is delivered which is collected at the town quay precipitating reservoirs and the Shirley sewage works. A small engine mixes the sludge and refuse together till it forms a solid, odourless, earthy looking substance. For this there is a ready sale, as farmers will take it away and pay 2*s.* 6*d.* a cartload. Nor is the portion of the refuse that is burnt lost. The residue of the combustion contains 20 per cent. of good hard clinkers and very fine sharp ashes. The clinkers provide a pure and reliable foundation for road-ways, &c., or they can be ground up and mixed with cement, excellent artificial flagstones being thus manufactured. A number of footpaths in the town are already paved in this manner, and this artificial stone has also been employed for the public baths, the corporation stables, &c. The cost of this stone only amounts to 2*s.* 6*d.* the square yard. The fine ashes serve to make excellent mortar, which is sold to builders at 7*s.* 6*d.* the cubic yard; this is a little below the market value of mortar of equal quality. In both these particulars there are advantages that are of importance from the public health point of view. It often happens that foundations are made of foul, corruptible refuse, and that the mortar used in building is altogether bad. The corporation provide hard core for foundations or road-mending and mortar which have both been absolutely purified while in the destructor furnace.

The initial cost of the destructor works—that is, the engine-house, the inclined roadway to bring up the refuse, the chimney shaft, the boiler and ironwork—amounted to £3723. The town quay precipitating reservoirs, &c., cost £3000. The annual expense in wages to stokers and feeders is set down at £251 6*s.* 8*d.* At the precipitating tanks the ferrozone costs £90, and with the wages of engine-drivers, men for mixing the manure, &c., the total cost for sewage clarification and disposal is £322 per annum. This makes for refuse and for sewage a grand total annual expenditure of £573. On the other hand, the Shirley authorities pay £200 a year for their supply of compressed air, which, added to the receipts from the sale of the sludge manure, realised in 1891 £600. The sale of the products of the destructor—concrete slabs, clinkers, mortar, &c.—brought in £300 more. The annual income is therefore considerably above the working expenses. Thus, the common complaint that the raising of sewage entails a heavy annual cost for working expenses has been most satisfactorily set aside. Of course, there is always the inevitable cost of collecting the town refuse, but this is quite independent of all systems of town drainage. Horses and carts must be provided to carry away the contents of the dustbins and the street sweepings; but even in this respect the town has economised and has ensured much greater efficacy by doing its own work. At the destructor works there are model stables, which contain the forty fine carthorses belonging to the corporation. These horses cost 3*s.* 9*d.* each per day, and this pays not only for their keep, but also the interest and the amortisation of the principal spent in purchasing the horses. The private contractor who formerly used to collect the town refuse charged 4*s.* per day per horse.

As we have remarked before, all this is very excellent, so far as it goes, but there is only one portion—and that the smaller portion—of the town which is well drained. There remain other districts—called for the sake of convenience, the high-level and the low-level districts—that are for the most part inefficiently drained. The high-level district comprises 328 acres and has a population of 27,380 persons; the low-level district measures 213 acres and has a population of 16,410. In the latter district the cellars are below high-water level. The sewers have a minimum fall of 1 in 600 and a maximum fall of 1 in 200. What with high tides and rainfall the sewers are surcharged, the water cannot escape and, flowing backwards, often floods the houses. They are mostly dwellings for the working classes that suffer in this manner. Even when the sewage does flow away satisfactorily, it falls into the river Itching, at what is known as the Belvidere outfall. This is further up the river than the corporation wharf, right among the yachting stations. The sewage being untreated, it naturally pollutes the river and mixes with the mud, which is exposed and bare when the tide runs out.

After due investigation it has been found that what is qualified as the higher-level district could be drained by gravitation without any pumping or raising contrivance. This district would yield about 821,000 gallons of sewage in the twenty-four hours. The lower district, at 30 gallons per head, would have an average of 492,300 gallons, and if unassisted by some mechanical contrivance it could not flow away. Besides these two districts, there is the Bevois Valley, which already possesses a pumping station, and raises its sewage to the extent of 30,000 gallons a day. Altogether, for these three districts, there would be about 1,343,700 gallons of sewage daily. To this may be added a possible rainfall of 3,000,000 gallons in a day. Profiting by the

experience gained in dealing as described above with a part of the sewage of Southampton, it is now proposed to extend the system, with some modifications, to the whole town. For this purpose it is intended to build a new set of precipitating tanks at the corporation wharf. Their capacity is set down at 789,000 gallons and they will be discharged twice in a day. The sludge collected at the bottom of these tanks will be lifted into other tanks of 184,500 gallons capacity. Here the sludge will go through a second process of precipitation, the affluent water will be sent back into the first set of tanks, and the much thicker sludge thus obtained will in part be used, as already described, for making manure by mixing it with refuse and road-sweepings, while such sludge as cannot be disposed of in this manner will be put into presses and converted into solid cakes some three feet square and an inch and a half thick. These cakes will make good manure and could easily be transported a great distance or stored till the best season for the sale of such products. The tanks where all this precipitating process will be carried out are to be connected with the refuse destructor by foul air exhausts, so that all the noxious gases generated in the process will be burnt in the furnace. In the low-lying district several ejector stations will have to be established, so as to raise the sewage and thus deliver it at the sewage works. The heat generated by the destructor will suffice to provide power to work these additional machines for lifting the sewage. Also where the foundations are waterlogged iron pipe sewers with lead caulking will be introduced. Two of these iron sewers in the project now under discussion have not, in our opinion a sufficient gradient, and we would urge that, rather than repeat the old error of insufficient fall, it would be better to incur at once the extra expense of a few more stations for raising the sewage.

The new sewers which it is proposed to build will receive all the drainage from the houses and all the rainfall collected on the roofs and in the backyards of the houses. The present old and defective sewers will be retained to carry off storm overflows, the water from the surface of the streets, and the subsoil drainage. Nothing can be more condemnatory of the present sewers than the act that they are leaky enough to act as collectors of the surrounding subsoil water. As it is, the sewage leaks from these old sewers into the subsoil. When they no longer receive sewage they will drain the soil, and thus greatly reduce the dampness prevailing in many parts of Southampton. As the sewage proper will enter small drains having a better gradient, it will flow off with much greater rapidity, and the rainfall will not be able to overcharge the sewers. The small sewers will be able to take 3,000,000 gallons in a day, so that the maximum rainfall would cause an overflow into the old sewers of only 1,500,000 gallons, and this would, for the most part, be clean water from the surface of the streets, soiled only by horse droppings, and not coming into contact with domestic drainage or refuse. To carry out this scheme it is estimated that the total cost would amount to £35,000. If borrowed at 3½ per cent., repayable with interest in thirty years, it would mean an outlay of £1902 per annum. The cost of working would raise the annual expenditure to, in all, £3200. But we have seen that the works, conducted on a much smaller scale, bring in about £900 per annum, so that the above outlay would not be all loss. In any case it is self-evident that sewers cannot be built and worked for nothing. The town is fortunate, for, to meet this indispensable outlay, it has a rapidly increasing population and a rising trade. So great and sudden is its prosperity that the nation has the right to expect that Southampton will not shrink from its new responsibilities. The town has done so well in many respects that it really has no excuse for not completing the good work already successfully begun. On the other hand, the local authorities will incur a very grave responsibility if they allow a part of the town to suffer much longer from water-logged sewers, flooded basements, and generally inefficient drainage.

STATISTICAL REPORT OF THE HEALTH OF THE NAVY FOR 1892.

(*Concluded from p. 112.*)

THE number of cases in 1892 comprised under the nomenclature of diseases of the respiratory system is 5870, and the invalidings and deaths number 273 and 85 respectively. The ratio of cases is 100·63 per 1000, a decrease of 2·56 per 1000 on the previous year, but the invaliding and death ratios are slightly higher than in 1891. Catarrh accounts for 4430 cases, bronchitis for 374, and pneumonia for 532 of the total number of cases; while 65 deaths of the entire mortality occurred on the home stations. The West Coast of Africa and Cape of Good Hope, the home, and the Mediterranean stations, and also the irregular force, show the largest ratios of cases, while the invaliding rates of the Home, China, Pacific, and South-east Coast of America stations are the highest.

As regards the class of cases treated in the naval hospitals at home, we may take the hospitals at Haslar and Plymouth as examples. During the year 1892 there were 1881 cases under treatment at Haslar in the medical side and 3463 in the surgical side of the hospital. The most prevalent medical diseases were influenza, rheumatism, catarrh, sore-throat, and "pneumonic phthisis." There were 40 deaths in the medical wards; of these, 11 were due to pneumonic phthisis, 9 to pneumonia, 5 to enteric fever, 3 to organic disease of the heart, 2 to bronchitis, 2 to malignant new growth, and 1 to each of the following: remittent fever, alcoholism, tubercle, aneurysm, thrombosis, empyema, disease of the kidneys, and suicide by hanging. Among the causes of invaliding pneumonic phthisis numbered 61 and organic heart disease 44. In the surgical wards of Haslar there were 3463 cases under treatment in 1892. Of these, 140 were invalided and 15 died. Under the heading of venereal diseases we find that there were 1926 cases treated during the year 1892, an increase of 183 on the number treated in the preceding year.

At the Plymouth Hospital 1912 cases were under treatment in the medical wards during 1892; 66 cases proved fatal and 288 were invalided. In the surgical wards the total admissions from all causes amounted to 2214 during 1892; of these, 87 were invalided and 8 died. The percentage of admissions for venereal diseases in 1892 was 48·5, as compared with 50·9 in 1891. Pneumonic phthisis, rheumatism, and heart disease figure largely among the causes of invaliding, and pneumonia and pneumonic phthisis among the causes of death in the medical side; whereas, in the surgical side, secondary syphilis, diseases of the eye and ear, and injuries were the chief causes of invaliding, while the causes of death in the 8 fatal cases were various. A table at page 20 of the report gives the figures and ratios for the hospitals abroad and the number of patients for whom there is accommodation in these institutions. The average number of days' treatment per case was 89·8 at Malta, 40·16 at Gibraltar, and 30·0 at Bermuda. At Malta there is hospital accommodation for 58 officers and 222 seaman and marines, and a total of 1271 cases were treated there during 1892. There was a decided decrease of admissions for enteric fever and remittent fevers at Malta in 1892, as compared with 1891. The most frequent causes of invaliding were, however, these fevers, together with diseases of the respiratory system, venereal diseases, and affections of the nervous system. Of 27 deaths at the Malta hospital in 1892, 14 were from enteric fever. The Mediterranean squadron was composed in that year of 35 vessels of different kinds and sizes, and the mean force was 8770, the total number of cases of disease and injury entered on the sick list being 9631.

It is mentioned that at Malta extensive dredging operations for the removal of old accumulations of sewage, which form the bed of the grand harbour, had been carried out in 1892 in the notoriously unhealthy part known as the French creek; this removal is probably no mean factor in the reduction of cases of simple continued and other forms of fever. As compared with the preceding year there has been, as we have said, a great decrease in enteric fever during 1892; whereas there were 136 cases shown in 1891 there are only 49 in 1892. Of this number 13 were invalided and 19 died, but in the previous year the numbers were 41 invalided and 29 died.

As regards malarial fevers in the Mediterranean fleet, the medical officer of the *Trafalgar* remarks: "The more one sees of many cases of so-called remittent fever, the more one is struck as to its dissimilarity with remittent fever of a purely malarial origin. When it is taken into consideration that it prevails in localities which certainly do not possess the conditions usually considered necessary for the generation of the malarial poison, together with the indistinctness of periodicity in the symptoms, the complete failure of quinine to shorten the duration of the attack or to have any curative effect, with certain other minor points, one becomes very sceptical as to the purely malarial origin of Mediterranean fever, and rather attributes it to the imperfect drainage and insanitary condition of the

towns, combined with the heat of the sun and telluric influences."

The largest number of cases of remittent fever is returned by the *Cocatrice* while employed in the river Danube. With a complement of about 65 officers and men, this vessel shows 45 cases of this fever. The medical officer, Surgeon Richard Miller, M.B., speaks highly of the prompt beneficial effect of antipyrin in relieving the headache which accompanies this fever.

With regard to the great increase in the number of cases of malarial fever on the West Coast of Africa, principally attributable to the operations on shore in the expeditions in the Gambia, the report contains some interesting observations. The special service vessel *Alecto* heads the list with 133 cases: 8 of ague, 121 of remittent fever, and 4 of malarial cachexia. There were two distinct outbreaks of these fevers. The first occurred as a consequence of the stay of the ship in the Vintang Creek, between Jan. 18th and Feb. 5th, during the last three days of which period she had on board an expeditionary force nearly 500 strong. The second outbreak was the result of a sojourn in the Great Scarcies river from April 4th to the 14th. Surgeon D'Arcy Harvey, M.B., states that his experience is not favourable to the prophylactic use of quinine. The blue-jackets of the expeditionary force, although receiving daily doses of quinine, were attacked by fever in the same proportion as the men on board his ship who had no quinine, and when attacked the former seemed to be less susceptible to the influence of the drug than the latter. In this he is corroborated by the experience of the medical officer of the *Mosquito*, whose remarks on malarial poisoning and the development of its manifestations are interesting. The medical officer of the *Racer*, after a large number of observations, gives the period of incubation at from one to twenty days, and believes, on the other hand, that benefit seems to accrue from the use of quinine as a prophylactic in a highly malarious region, and he speaks highly of antipyrin "in reducing temperature, lessening headache, causing perspiration, and in soothing the patient generally." The efficacy of quinine as a curative agent in malarial disease is not doubted.

We think it is to be regretted that the scope of these naval reports is not enlarged. A statistical report of the health of the navy is a very useful and necessary document, of course, for the information of the House of Commons, which has mainly to deal with the efficiency and financial relations of the navy, but statistics are confessedly not a vivacious and inspiriting form of literature. Naval medical officers see so much of the world and of different races, and of the diseases of our sailors in different climates, as well as of the natural history, topographical features, and products of the countries they visit, that their opportunities for recording new, interesting, or instructive observations are such as fall to the lot of few of us. Why should not their observations in these respects find a permanent record in the volume before us?

INFLUENZA IN 1775.

BY AUGUSTIN PRICHARD, F.R.C.S. ENG., M.D. BERLIN,
CONSULTING SURGEON TO THE BRISTOL ROYAL INFIRMARY.

WHILE looking over some very old documents connected with Quaker families of the last century I found the following paper. It is dated Dec. 6th, 1775, and is apparently a copy written in the even round hand which was peculiar to the Quakers, and signed by John Fothergill, London, himself a staunch Quaker and a very successful and most charitable physician, who began practice before 1750. No disease is named in the paper, but it seems to be so complete and graphic an account of influenza, as we now know it, that I have made a copy of it, *verbatim et literatim*, thinking it worthy of a place in THE LANCET. On searching for some account of the earlier days of the College of Physicians I found in a book called "Physic and Physicians" a notice of John Fothergill, in which it says: "During the prevalence of the influenza in the year 1775–6 (Old Style), he is said to have attended sixty patients a day, and his profits were estimated at £8000 a year"; and this sentence identifies the disease thus described.

"A SKETCH OF THE LATE EPIDEMICK DISEASE AS IT APPEARED IN LONDON.

"About ye beginning of the last month it was mention'd to me in many families that most of the servants were sick; that they had colds, coughs, sorethroats and various other complaints. In the space of a week these complaints became more general, few servants escaped them, especially the men, who were most abroad; many of the other sex, likewise, and people of higher condition were attacked; nor were children wholly exempted. The disease, which had hitherto been either left entirely to itself, or had been treated with the usual domestick medicines appropriated to colds, now claimed the attention of the faculty, and for the space of near three weeks kept them for the most part universally employed. Most of those whom I saw were seized (and often so suddenly as to be sensible of the attack) with a swimming or slight pain in the head, a soreness of the throat and all over the body, with a sense of coldness, particularly in the extremities. A cough soon followed, a running of the nose, watery eyes, slight nausea, frequent calls to make water, and some were seized with a diarrhœa. More or less of feverish heat, inquietude, pain about the breast, præcordia, and in the limbs soon succeeded, but in various degrees. Many were capable of continuing in their usual occupations under these symptoms; others were oblidged to submit to confinement, and not a few to their beds. The tongue was always moist; the skin seldom remarkably hot or dry; the pulse often full, quick, and harder than one would have expected from such a temperature of the skin. Several were seized with diarrhœa; the stools were always black or of a deep yellow colour; and so were those for the most part which were procured by purgative medicines.

"In a few days every complaint abated except the cough; this continued the longest of all the symptoms and in the forepart of the night was exceedingly troublesome and vexatious; towards morning generally came on a sweat and easy expectoration. Those who were seized at first with very copious defluctions from the nose and the fauces or had a plentifull and spontaneous discharge of black billious stools, or made large quantities of a high-coloured urine, or sweated profusely of their own accord a night or two after the seizure, soonest grew well.

"In many cases it was necessary to take away some blood, the condition of the pulse and the vehemence of the cough making it necessary. The blood was almost uniformly sizy, representing a flat cake of yellowish tallow floating in a deep yellow serum: very few instances occurred where the size formed that cup like appearance which occurs in most of the genuine inflammatory disorders. By warmth, diluting cooling liquids, mild diaphoreticks, gentle and repeated purgatives the disease for the most part soon gave way, in subjects otherwise healthy. Sometimes it was necessary to repeat the bleeding; sometimes blisters became necessary, and were serviceable in abating the cough which was the last of all the symptoms that gave way: after the necessary evacuations, anodynes for the most part had very salutary effects. In many instances the disease assumed the type of an intermittent towards its decline; the bark however did not generally succeed in curing it. The symptoms, as often happens in billious disorders, were sometimes aggravated by this medicine. A few doses of some mild cathartick most commonly removed it effectually.

"Many who neglected themselves and went abroad with the distemper upon them frequently got additional colds and brought on a fever of a most dangerous kind; a few died phrenetick. Ancient, asthmatick persons were likewise great sufferers, for the most part a peripneumonick fever came gradually on which often terminated fatally, and of those who did recover their amendment was slow and medication difficult. And indeed it appeared that very few persons wholly escaped the influence of this morbid constitution; for it seemed to aggravate every present malady. It proved fatal likewise to several very young children, disposing them to violent coughs or diarrhœas. Perhaps however there is scarcely an instance to be met of any epidemick disease in this city, where so many persons were seized in so short a time and with so little comparative mortality.

"Though attempts to ascertain the causes of epidemicks are for the most part more specious than substantial, it may not be improper to mention a few facts that gained my attention; to others many more may have occurred and worthy to be recorded. During the greatest part of the summer in that part of the country where I then was (Cheshire) the air was of the most equal temperature I ever knew. In the space of two months the quicksilver in the thermometer once rose to 68, once fell to 56; but for 6 weeks together it kept between 60 and 66, day and night. The borometer did not vary much more. The weather was during this time very changeable, much inclined to wet; and though it rained more or less

almost every other day for six weeks, yet upon the whole no unusual quantity of rain fell: it sunk into the ground as it fell and made the earth very soft and miry; but seldom swelled the brooks or occasioned floods. During this time horses and dogs were much affected; especially those that were well kept. The horses had severe coughs, were hot, forebore eating and were long in recovering. Not many of them died, that I heard of, but several dogs.

"To the consideration of the faculty in this city is this sketch of the late epidemick submitted with all due deference and with a request that if the observations they have made do not corrispond with this recital they will be pleased to communicate their remarks while the remembrance of the facts are recent; in order that as exact an accôunt of this disease as possible may be transmitted to our successors. If those physicians in the country into whose hands this essay may come will be so oblidging as to mention the time when this epidemick made its appearance in their neighbourhood and wherein it differed from the preceding sketch either in the symptoms or method of cure they will likewise contribute to the same good purpose. The united observations of the faculty at large must greatly exceed the utmost efforts of any individual, however warmly he may be disposed to promote the utility of his profession.

London, Dec. 6th, 1775. "JOHN FOTHERGILL."

REPORTS OF LUNATIC ASYLUMS FOR 1892.

Parkside Asylum, Macclesfield.—The number of patients at this asylum rose in the twelve months from 632 to 661, the latter number consisting of 291 men and 370 women. As many as 50 per cent. of the males admitted could be pronounced incurable on admission, and there results the low recovery-rate of 30·9 per cent. and the high death-rate of 12·2 per cent. Much more encouraging are the high recovery-rate and the low death-rate among the women, being 45·9 and 6·9 per cent. respectively. Taking both sexes together, the recoveries amounted to 39 per cent. of the admissions, and the deaths to 9·2 per cent. of the daily average number resident. Referring to the large proportion of deaths from pulmonary tuberculosis, the superintendent says: "I cannot myself doubt that under improved sanitary conditions there would be less phthisis in our midst, and I trust that the time is not far distant when the committee will feel able to realise some such scheme of heating and ventilation as that which has been occupying so much of their time and thought recently." A strong appeal like this ought not to be lightly put aside under circumstances which appear to demand serious consideration. Dr. Sheldon favours the principle of early superannuation on various grounds, and he adds: "Certainly I have met with few attendants who, after twenty years' work, were not distinctly inefficient and mentally deteriorated."

Dorset County Asylum.—The medical superintendent reports an "alarming increase" in the number of admissions, that for the year 1892—viz., 100—being the highest on record. The total number of inmates at the end of 1892 was 496: 243 men and 253 women. It is reckoned that over 70 per cent. of the cases were hopelessly incurable on admission, the male patients being less favourable and generally more hopeless than the women. A large proportion of those admitted were advanced in years, and 77 per cent. of them were in poor bodily health. Fully 50 per cent. of those admitted were suffering from one or other of the forms of mania. Dr. Macdonald calls attention to the larger proportion of readmissions among women as compared with men. "Notwithstanding that the total number of admissions was 50 of each sex, the readmissions were 3 per cent. of the men and 12 per cent. of the women. This is generally so, and in some little way may be taken as a factor in analysing psychological differences with reference to the sexes. The difference here alluded to is not a coincidence or any exception to a fairly general rule, as the following figures will show. Taking the five years ending December, 1891, the total number of male admissions was 186, of which number 22 were readmissions; while during the same quinquennial period the female admissions were 228, of whom 49 were readmissions. In other words, during the five years 11 per cent. of the men were readmissions, as against 21 per cent. of the women. These facts are of material help to those who are yearly endeavouring to throw if but a shadowed light on the causation of mental disease. Though far from being a profitable, however engrossing, a field of research, such humble truths as regards readmissions are of the utmost value, for do they not tend to show that the female mind is less able to resist disease, and to regain its normal health, than man's; also, does it not follow that the mother is much more likely to be the progenitor of hereditary taint?" With regard to the causation of insanity it is stated that hereditary predisposition is *primâ facie* the most productive source of mental disease in the county of Dorset, as many as 26 per cent. of the admissions in 1892 being directly attributable to this cause, and this would be higher still if the full history could be traced. With regard to intemperance in drink as a cause of insanity Dr. Macdonald speaks very strongly, and says that it is to the credit of the inhabitants of Dorsetshire that alcohol does not rank as one of the main causes; he regards 6 per cent. as the maximum for that county. The recovery-rate among the women was more than double that among the men—the former being 46·80 per cent. as against 20 40 per cent. in the latter. The death-rate was low, being 7·75 per cent. of the average number resident. Lung disease continues to rank high as a cause of death, and in this relation reference is made to the defective arrangements for heating and ventilation.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 7117 births and 5726 deaths were registered during the week ending Jan. 13th. The annual rate of mortality in these towns, which had been 22·6 and 22·8 per 1000 in the preceding two weeks, further rose last week to 28·6. In London the rate was 29·5 per 1000, while it averaged 27·9 in the thirty-two provincial towns. The lowest rates in these towns were 19·5 in Gateshead, 20·7 in Newcastle-on-Tyne, 20·8 in Swansea, 21·2 in Leicester, and 21·6 in Blackburn; the highest rates were 33 0 in Burnley, 33 3 in Liverpool, 36·6 in Bristol, 55 7 in Plymouth, and 60·2 in Norwich. The 5726 deaths included 548 which were referred to the principal zymotic diseases, against 487 and 495 in the preceding two weeks; of these, 219 resulted from whooping-cough, 108 from measles, 78 from diphtheria, 52 from scarlet fever, 47 from "fever" (principally enteric), 36 from diarrhœa, and 8 from small-pox. No fatal case of any of these diseases occurred last week in Blackburn; in the other towns they caused the lowest death-rates in Newcastle-on-Tyne, Brighton, Hull, and Derby; and the highest rates in Burnley, West Ham, Sheffield, Salford, and Birkenhead. The greatest mortality from measles occurred in Wolverhampton, Norwich, Birkenhead, Salford, and Birmingham; from scarlet fever in Norwich and Burnley; and from whooping-cough in Liverpool, Swansea, Sheffield, Plymouth, and Bristol. The mortality from "fever" showed no marked excess in any of the large towns. The 78 deaths from diphtheria included 55 in London, 5 in West Ham, 4 in Manchester, and 3 in Cardiff. Three fatal cases of small-pox were registered in Bradford, 2 in Birmingham, and 1 each in London, West Ham, and Nottingham, but not one in any other of the thirty-three large towns. There were 88 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 13th inst., against 100, 93, and 94 at the end of the preceding three weeks; 12 new cases were admitted during the week, against 14 and 15 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had been 2993, 2988, and 2855 at the end of the preceding three weeks, had further declined to 2736 on Saturday last; 224 new cases were admitted during the week, against 262 and 210 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 516 and 566 in the preceding two weeks, further increased to 762 last week, and were 41 above the corrected average. The causes of 115, or 2·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Cardiff, Bradford, Newcastle-on-Tyne, and in seven other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Preston, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 27·8 to 21·5 per 1000 in the preceding six weeks, rose again to 23·8 during the week ending Jan. 13th, but was 4·8 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 20·0 in Greenock and 21·1 in Edinburgh to 25·1 in Paisley and 37·6 in Perth. The 679 deaths in these towns included 48 which were referred to whooping-cough, 13 to diarrhœa, 8 to diphtheria, 5 to scarlet fever, 2 to measles, and not one either to small-pox or "fever"; in all, 76 deaths resulted from these principal zymotic diseases, against 63 and 76 in the preceding two weeks. These 76 deaths were equal to an annual rate of 2·7 per 1000, which corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased from 27 to 34 in the preceding three weeks, further rose to 48 last week, of which 22 occurred in Glasgow, 8 in Edinburgh, 7 in Dundee, 4 in Leith, and 4 in Paisley. The deaths referred to diphtheria, which had been 8 and 12 in the preceding two weeks, declined again to 8 last week, and included 4 in Glasgow and 2 in Edinburgh. The 5 fatal cases of scarlet fever corresponded with the number in the preceding week, and included 3 in Glasgow, where the 2 deaths from measles were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 155 and 146 in the preceding two weeks, rose again to 157 last week, but were 84 below the number in the corresponding period of last year. The causes of 55, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 36·8 and 27·1 per 1000 in the preceding two weeks, rose again to 42·5 during the week ending Saturday, Jan. 13th, a higher rate than has been recorded in any week since July, 1892. During the thirteen weeks of last quarter the death-rate in the city averaged 27·4 per 1000, against 23·2 in London and 22·3 in Edinburgh. The 235 deaths registered in Dublin during the week under notice showed an increase of 103 upon the number in the previous week, and included 21 which were referred to the principal zymotic diseases, against 20 and 30 in the preceding two weeks; of these, 7 resulted from measles, 6 from whooping-cough, 4 from "fever," 4 from diarrhœa, and not one either from small-pox, scarlet fever, or diphtheria. These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 3·4 in London and 1·9 in Edinburgh. The deaths referred to measles, which had been 3 in each of the preceding two weeks, rose to 7 last week, a higher number than in any week since May, 1892. The 6 fatal cases of whooping-cough differed but slightly from those returned in recent weeks. The deaths referred to different forms of "fever," which had declined from 10 to 2 in the preceding three weeks, rose again to 4 last week. The 235 deaths registered in Dublin last week included 40 of infants under one year of age, and 101 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded those recorded in recent weeks. Eleven inquest cases and 7 deaths from violence were registered; and 97, or more than a third, of the deaths occurred in public institutions. The causes of 10, or 2·5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAIN MARKS has been posted to the Station Hospital, Western Heights, Dover, on return from foreign service, and Surgeon-Major Ward has joined the North-Western District for duty. Surgeon-Captain Salmon has arrived in Egypt on return from leave, and Surgeon-Captain Reily has arrived in England on completion of a tour of service in Bermuda. The following officers have rejoined their several stations from leave of absence: Surgeon-Captain Rowan and Surgeon-Lieutenant Fowler, North-Eastern District; Surgeon-Majors Smith and Ellis, Aldershot; and Surgeon-Major Crofts, Eastern District. Surgeon-Major-General Paterson, now serving at Malta, will succeed Surgeon-Major-General Wade as Principal Medical Officer at Aldershot, and Surgeon-Major-General Paterson's successor at Malta will most probably be Surgeon-Major-General Inkson from Portsmouth.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel Henry S. Muir, M.D., to be Surgeon-Colonel, vice J. Y. Donaldson, M.D., retired. Surgeon-Lieutenant-Colonel Gustavus R. Rae, to be Brigade-Surgeon-Lieutenant-Colonel, vice H. S. Muir, M.D.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Colonel Walsh will occupy the post of Principal Medical Officer, Madras Army, in succession to Surgeon-Major-General Hoysted. Surgeon-Colonel Martin is transferred from Allahabad to Lucknow to take the place of Surgeon-Colonel Walsh. Surgeon-Colonel G. Thomson, Administrative Medical Officer and Sanitary Commissioner, Central Provinces, is appointed to officiate as Principal Medical Officer of the Presidency District, vice Surgeon-Colonel L. P. Spencer, appointed to the Punjab Frontier Force. Surgeon-Colonel A. A. Gore, A.M.S., takes over the Administrative Medical Charge, Mhow District. Surgeon-Major Lane, in exchange with Surgeon-Lieutenant-Colonel Browne, A.M.S., is posted to general duty, Aden District. Surgeon-Lieutenant Kilkelly, I.M.S., is transferred from general duty, Bombay District, to general duty, Mhow District. Surgeon-Major J. Moorehead, Joint Civil Surgeon, of Simla, is appointed to the Medical Charge of the Army Headquarters Staff and Establishments at Simla. The services of Surgeon-Major J. Lewtas, M.D., I.M.S. (Bengal), are placed permanently at the disposal of the Government of Bengal. The services of Surgeon-Major C. L. Swaine, M.D., Officiating Sanitary Commissioner, Hyderabad Assigned Districts, are replaced at the disposal of the Military Department.

NAVAL MEDICAL SERVICE.

The following appointments are announced: Deputy-Inspector-General T. Browne, M.D., to the Bermuda Hospital; Fleet-Surgeons J. S. Dobbyn, to the *Durham;* and H. R. Osborne, to the *Fearless.*

MILITIA MEDICAL STAFF.

James Tracey Simpson, Gent., to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: The Highlanders: John Munro Moir, M.D., to be Surgeon-Lieutenant.—1st Northumberland (Western Division, Royal Artillery): William Turnbull, M.B., to be Surgeon-Lieutenant.—*Royal Engineers:* 1st Northamptonshire: Surgeon-Lieutenant W. Easby, M.D., to be Surgeon-Captain.—*Rifle:* 2nd (the Weald of Kent) Volunteer Battalion, the Buffs (East Kent Regiment): Herbert Woodley Joyce, Gent., to be Surgeon-Lieutenant.—1st (Exeter and South Devon) Volunteer Battalion, the Devonshire Regiment: Surgeon-Major J. D. Harris to be Surgeon-Lieutenant-Colonel, to resign his commission, and to be permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement.—Galloway: Surgeon-Lieutenant Robert Thomas Bell Lorraine, M.B., to be Surgeon-Captain.—1st Volunteer Battalion, the Royal Welsh Fusiliers: John Arthur Eyton-Jones, Gent., to be Surgeon-Lieutenant.—2nd Volunteer Battalion, the Prince of Wales's Volunteers (South Lancashire Regiment): Surgeon-Lieutenant Andrew Gray is appointed Lieutenant.

PRACTICAL SANITARY WORK IN INDIA.

In a memorandum by the Army Sanitary Commission in this country some of their more important suggestions are recapitulated in connexion with the reports from India for 1891. Alluding to the fact that throughout a great part of India there is no special machinery designed for the purpose of carefully and systematically investigating the condition of localities, and especially of those localities in which disease is prevalent at the time when all the facts are fresh in the minds of local observers, the Commission points out that such inquiries require to be undertaken by some independent body of investigators, numbering among them someone with the requisite technical knowledge of sanitary engineering in its practical application to public health. The institution of a Sanitary Board in each province has been an important step and one which has been productive of much good; but it should be recognised that sanitary work requires special knowledge, and that to appoint anyone as a sanitary engineer who has not had experience in sanitary work is to appoint one who must acquire his

sanitary experience at the expense of the towns and villages. In order to obtain efficient work and avoid wasteful expenditure it is suggested that a certain proportion at least of the engineering staff provided for India should be specially trained and instructed in all sanitary work. The presidency towns are provided with health officers, and the civil surgeon of the district is a member of the municipal committee in most of the larger towns throughout the provinces, and in every cantonment and civil station a staff of officers exists whose function it is to deal with disease-causes and their removal; but it cannot be said that our Indian sanitary administration is as efficient and successful as it might be, notwithstanding the progress that has been made and the good work which has undoubtedly been done in this direction. We are glad to notice that a sanitary engineer has been appointed to the Government of the North-West Provinces, and has been made a member and technical adviser on sanitary matters of the Provincial Sanitary Board.

ARMY MEDICAL SCHOOL, NETLEY.

The examination of the surgeons on probation now at the Army Medical School, Netley, will commence on Tuesday, Jan. 23rd, and terminate on the following Monday. The results will be announced on Wednesday, 31st inst., when the prizes will be distributed by Sir Alfred Lyall, K.C.B., D.C.L.

The *Army and Navy Gazette* announces that the Bombay Medical Retiring Fund have made the following allotment of annuities for 1894:—Surgeon-General Sir W. G. Hunter, M.D., K.C.M.G., £252; Brigade-Surgeon H. Atkins, £210*; Surgeon-Major G. E. Seward, M.D., £210*; Surgeon-General J. Pinkerton, M.D., £168*; Deputy-Surgeon-General H. R. L. Macdougall, M.D., £168*; and Surgeon-Major N. Hopkins, £168*. Those marked (*) lapsed to Government, the officers having received a refund of their subscriptions.

We much regret to announce the loss sustained by the Indian Medical Service by the recent decease of two eminent members of that service—viz., Surgeon-General Hutchinson, who died at the age of sixty-two, at Clanricarde-gardens; and Surgeon-General Saunders of the Bengal Staff Corps, who died on the 7th inst., at Ryde, aged seventy-four. Both medical officers were on the Retired List.

The *Broad Arrow* states that the officer now heading the foreign roster, in Surgeon-Colonel's grade, is Surgeon-Colonel J. B. Hamilton, Principal Medical Officer, Home District, who will, in all probability, fall to the Cape in March next, relieving Surgeon-Colonel Colahan, who comes home on promotion to higher grade, vice Surgeon-Major-General W. Collis, in April.

The name of Surgeon-Captain M. L. Hughes, A.M.S., appears in the list of successful candidates at the recent examination for promotion at stations abroad, as having passed in Military Law.

H.M.S. *Tamar* arrived at Portsmouth on the 15th inst. with six patients for Netley.

Correspondence.

"Audi alteram partem."

"THE DIFFICULTIES OF DIAGNOSING SMALL-POX."

To the Editors of THE LANCET.

SIRS,—I have read with very great interest the letters of your correspondents respecting the diagnosing of small-pox and the difficulties which frequently attend it, and with your kind permission I will venture to illustrate these difficulties which in many cases, particularly to those whose experience of small-pox is not great, are very real indeed. The description quoted by Dr. Francis Tayler of a typical case of varicella is very good, and if varicella only presented itself always in that form it would render the differential diagnosis of small-pox and chicken-pox one of the easiest. Unfortunately it does not always so present itself, and in my experience, particularly amongst the ill-nourished and insufficiently clothed children of the poor, the eruption, as described by Dr. Tayler, is not so frequently seen; it is more often a very ill-developed eruption vesicles small and flattened, badly filled, many papules never becoming vesicular at all, but dying off before that stage is reached. Upon the body a few broken-down vesicles may be found, with an areola of redness due in many cases to the irritation caused by dirty clothes and scratching. In such cases as I am describing it is, however, generally possible to find one or two unbroken and diagnostic vesicles in the axilla, the groin, or folds of the buttocks. Subjective symptoms cannot be always relied upon to aid diagnosis very much. I may observe that it is very unusual to find small-pox attacking a young vaccinated child under six years of age, and I always examine such a child most carefully for evidences of successful vaccination, deeming that to be of great value as an aid to diagnosis.

To illustrate the above remarks I will give two cases. On Sept. 27th, 1892, an unvaccinated child aged three months was sent to the Wharf certified as suffering from small-pox. The patient had a fairly copious papular and vesicular eruption upon the face and body generally, the papules large, some with an inflamed base, many vesicles broken down and scabbing, some papules still appearing. The eruption appeared first on the face on Sept. 21st. I based my diagnosis that the case was one of varicella upon the following facts: the child was not ill, as we generally expect to find a young unvaccinated child suffering from small-pox; the eruption was not uniform; it had evidently not all come out at once; it was too superficial. I vaccinated this child and returned it; unfortunately the vaccination did not "take," and it was again unsuccessfully vaccinated some little time later, and it was not until some weeks later that this child was successfully vaccinated by the public vaccinator. At the time of my sending this case back a case or cases of small-pox were said to have existed in the house from which it was sent, subsequent events proving this to be the case.

On Dec. 9th, 1893, a female patient, aged thirty, vaccinated at sixteen years of age, was sent to the Wharf. On admission she had a scanty papular eruption on the face, each papule surrounded by a slightly reddened areola and with a somewhat hardened base. There was a history of severe prodromal symptoms. The eruption appeared first on the back on Dec. 7th; she was perfectly well on Dec. 1st; she had headache, backache, and pains in the limbs on Dec. 3rd; vomiting on Dec. 4th; and shivering on Dec. 5th; to judge by an ordinary examination of the eruption on the face, and the history of severe prodromal symptoms, this might easily have been mistaken for a case of small-pox; but on examining the eruption on the face more carefully I found one or two broken vesicles very much like those seen in chicken-pox, being very superficial, situated on the temple and almost concealed by the hair. These led me to examine the eruption on the body, and upon the upper third of the thigh, and on the inner side I found two large unbroken vesicles and a third one in the groin, all very typical of varicella. I vaccinated this patient at once and detained her until I found the vaccination was successful, when I sent her home. I will conclude by remarking that, with reference to the first case I have given, it is not very unusual to find cases of chicken-pox and small-pox existing in the same house and at the same time.

I am, Sirs, yours faithfully,

T. B. BROOKE, Medical Officer, South Wharf.

River Ambulance Service, Jan. 11th, 1894.

To the Editors of THE LANCET.

SIRS,—Permit me to mention another eruption, that of vaccinia, which may complicate this diagnostic puzzle, for such it amounts to, on occasion. On board a slow emigrant ship, crowded with Sicilians and Italians, the question arose in the case of a man with a suspicious-looking eruption. Is it vaccinia? is it varioloid? or is it varicella? This eruption commenced when we had been at sea for a much longer period than that of the incubation of small-pox. It could not, therefore, be due to modified variola. Though at first sight it looked like that of varicella, the patient's age, the fact that no children on board were affected, and, above all, that only one crop came out, some of the vesicles becoming slightly umbilicated, negatived this assumption. I decided—whether rightly or wrongly I do not know to this day—on vaccinia. The man had three large prominent vaccination scabs on the right arm. He came to me on the eighth day after I had vaccinated him complaining of headache and the spots. I noticed vesicles on his face, here and there slightly umbilicated, some pustulating, and on stripping him others were seen on the trunk and limbs. They appeared first on the arm, and were most marked about the vaccination scabs

and on the face. He had had no vomiting, no pain in the back, and only slight anorexia and pyrexia. Whatever it was, I decided to watch and isolate him as best I could in the steerage, with carbolised sheets. A small wooden structure on deck was already full with cases of measles, and in winter one cannot use boats for isolation. On arrival, the ship was detained by the quarantine authorities, experts from the city were consulted, who discussed and differed, and after four days we were allowed to proceed up the river. The man was placed in a fever hospital, and the immigrants vaccinated by me had permission to land. The others, who all had recent vaccination certificates, were sentenced, poor healthy souls, to fourteen days' imprisonment. No small-pox occurred subsequently. During another voyage there was a case of chicken-pox about which I had no doubt at all. A child developed rosy papules, which rapidly became globular, gradually enlarging, unicellular vesicles surrounded by pink-red areolæ, fresh crops following the first. We passed quarantine, but on docking a health officer came on board. He saw the case in the stage most difficult to diagnose—when the vesicles were dried up and scabbing—and unhesitatingly pronounced it to be small-pox. I handed him my medical log. He only smiled pragmatically and pointed to the eruption. Luckily for us, though, a senior medical man judged the case, with a verdict for varicela.

I am, Sirs, yours faithfully,

Brighton, Jan. 17th, 1894. J. E. S. BARNETT.

"HÆMORRHAGE FOLLOWING TONSILLOTOMY: ITS CAUSES AND APPROPRIATE TREATMENT."

To the Editors of THE LANCET.

SIRS,—Mr. Philip De Santi, in his able and interesting article under the above heading in the last issue of THE LANCET, refers to my experience, but he does not quite represent it in the statement that I have "had only two slight accidents." The following are the words given in the last three editions of my book: "Regarding the question of hæmorrhage, I can but say that it has been most rare in my experience, and I have only seen and known of three cases in my own practice and that of my colleagues during a period of nearly twenty [now twenty-eight] years in which the bleeding has been serious, and only one in which it was at all alarming." Two of the cases occurred more than twenty years ago, when I was associated with the late Sir Morell Mackenzie. In one case, that of a young boy, irritation from a crumb of toast eaten against orders necessitated my remaining with him for forty-eight hours. The bleeding, which was of the character of persistent oozing, was arrested by styptics and pressure, and no large vessel required to be tied. The second was that of a domestic servant, in whom bleeding occurred on the third day after the operation, while she was kneeling and cleaning door-steps. The third, of rather later date, was that of a young man about twenty years of age, in which, the tannic and gallic acid solution having failed to arrest the hæmorrhage, "styptic colloid," with pressure, was successful. As a result of these events I have for many years consistently and by printed directions insisted in private as well as in hospital practice on the greatest care being observed with regard to both dietary and exercise. I am well within the mark in stating that in the last twenty-eight years my individual practice, combined with that of my colleagues, would represent an intimate knowledge of 20,000 cases of tonsillotomy, and I have yet to see one with serious results after operation with the tonsillotome where these precautions have been conscientiously observed.

I am, Sirs, yours faithfully,

LENNOX BROWNE.

Mansfield-street, Portland-place, W., Jan. 12th, 1894.

"ERYTHEMA NODOSUM IN THE MALE ADULT."

To the Editors of THE LANCET.

SIRS,—I had a somewhat similar case, some nine months ago, to that which Surgeon-Lieutenant J. G. M'Naught records in the last issue of THE LANCET. A coachman aged thirty-five years complained of pains all over him and of feeling cold; his temperature was 101° F. at first; he had slight bronchial catarrh. The patient looked cold and miserable; he did not want to leave off his work if possible, so he was treated for his cough; but the pains became worse in the course of a day or so, and he was sent to bed and attended daily. He was put on salicylate of soda, his pains having become more rheumatic in nature, but no swelling of the joints was visible and no tenderness of the joints or pain on movement. When in bed he sweated a great deal; his temperature varied for a week between 99° and 101°. At the end of a week he got ups feeling better. After being about for a day he showed me hi, shins, which presented very numerous patches of erythema nodosum; there had been no signs of it while he was in bed. Some of the patches were from an inch to an inch and a half in diameter, very much raised, very red and livid-looking, nodular, and excessively tender; the patches faded gradually into the surrounding tissue. His legs gave him a great deal of pain; they were treated with red lotion and rest; he was unable to walk without limping. He had a remarkably good family and personal history, except that off and on he had suffered very severely with sciatica; he was naturally of a cheerful disposition and so unaccustomed to be ill that he was quite depressed by this illness, and if I had not known his usual cheerful manner I should have called him neurotic. He was married and had strong healthy children. My excuse for sending this notice of the case is that (as Surgeon-Lieutenant M'Naught says) they are mentioned in the text-books as being of very rare occurrence in the male ad ult.

I am, Sirs, yours faithfully,

ALWORTH MEREWETHER, M R C.S. Eng., L R.C.P. Lond.

The Terrace, Barnes, S.W.

"CHLOROFORM IN NASAL GROWTHS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 6th there is a letter from Dr. Holloway practically advocating the discontinuance of the use of chloroform as an anæsthetic in nasal surgery. He instances the fact that Mr. Lennox Browne, Dr. Dundas Grant, and Mr. Wyatt Wingrave operate with gas as the anæsthetic. Does Dr. Holloway mean that these gentlemen use this anæsthetic for all their hospital as well as their private cases? If this is not the fact I think it should be clearly stated, for no fair comparison can be made if hospital cases are excluded from gas and included in chloroform. My experience leads me to believe that the latter anæsthetic is an extremely safe one for children, and that for the removal of post-nasal growths, especially when, as is so frequently the case, they are accompanied by enlarged tonsils, it is the best. The position of an operator using gas as the anæsthetic, when he sees the stump of a recently amputated tonsil spurting blood, cannot be very pleasant; but, apart from this danger, I do not believe that there is sufficient time given by this anæsthetic for the thorough performance of the operation, and thoroughness is absolutely necessary. Dr. Holloway seems to be under the impression that this operation is in danger of being lost because of a very occasional death under chloroform. At the London Throat Hospital chloroform has been used for seven years, with very few exceptions, by itself as the anæsthetic in the removal of these growths as well as in other operations, and there has only been one death. I doubt whether any institution can give a better record than this. The removal of these growths is generally spoken of as a slight operation, and to ordinary individuals this term applies not to the operation only, but to the cause as well. Now this cannot be too clearly and emphatically protested against. To allow a child to grow up without the power of breathing through its nose—the passage which nature has provided for the proper filtration and warming of the air before it is brought in contact with such a delicate organ as the larynx—is cruel in the extreme when the cause of the mouth breathing is known, and I do not believe that English parents would refuse to allow a medical man they trusted to remove the cause because he wished to use chloroform as the anæsthetic. As to giving the operation up entirely, one has only to look at the countenances of the victims, not to speak of their general physique, for an answer.

I am, Sirs, your obedient servant,

GRIFFITH CHARLES WILKIN.

Weymouth-street, W., Jan. 9th, 1894.

To the Editors of THE LANCET.

SIRS,—I have the misfortune to be one of the operators in whose practice a death recently occurred during the administration of chloroform for the removal of post-nasal adenoids.

I am therefore much interested in Dr. Holloway's letter on this subject in THE LANCET of the 6th inst., and in Dr. Bailey's comments thereon in your issue of the 13th inst. An experience of some hundreds of cases convinces me that there is a real danger in the use of chloroform in this operation, and I am most anxious to find an efficient substitute, and my object in writing is not to criticise but to elicit further information from Dr. Holloway and other gentlemen who are familiar with the use of nitrous oxide gas.

I differ entirely from Dr. Bailey when he speaks of the danger of asphyxiation from hæmorrhage. My experience would lead me to think that the danger arises entirely from the nasal obstruction, and that the period of maximum danger is over when the operation is commenced. It is neither necessary nor desirable to induce profound surgical anæsthesia, but at the same time I agree with Dr. Bailey in thinking that nitrous oxide gas is not a suitable anæsthetic in those cases where we should most desire its use. First, because the period of anæsthesia is much too short. It is given to few men to be able to remove a couple of hypertrophied tonsils and efficiently scrape out the naso-pharynx in a young child with a narrow throat in a period of not more than from thirty to sixty seconds. If the tonsils bleed at all freely it is in most cases absolutely necessary to swab out the pharynx before touching the adenoids, and in bad cases from one to three minutes is by no means too long to occupy in clearing the naso-pharynx. The second objection that strikes one is that the spasm which is induced by the nitrous oxide gas renders preliminary "gagging" a necessity, and the general jactitation of the muscles necessitates the presence of a second trained assistant or nurse. In hospital practice these may not be such serious matters, but in young and nervous children in private practice preliminary "gagging" would of itself give rise to trouble. Incidentally I may mention that I have recently, where I could, been "gagging" before administering chloroform.

And lastly, Sirs, I would, in common with many other members of the profession, be glad to have some further details of the 2000 cases in which nitrous oxide gas was administered in the Central London Throat Hospital. The time is not so far distant since I heard it stated in a medical society and fortified by statistics that ether was an absolutely safe surgical anæsthetic, and that every unfortunate practitioner in whose hands a chloroform fatality occurred would ere long be indicted for manslaughter. The more general use of ether has, however, led to its quota of fatalities, and I am strongly of opinion that a more extended use of nitrous oxide gas in post-nasal adenoids will in like manner prove it to be not entirely free from danger, and in this connexion I would recall the recent death at Batley from its use for tooth extraction, where the evidence seemed clearly to indicate that the "misadventure" was due to nasal malformation and consequent obstruction to the breathing. In conclusion, permit me to hope that Dr. Holloway will be good enough to favour the profession with another and a more detailed account of his experience in the use of nitrous oxide gas in this operation.

I am, Sirs, yours faithfully,

P. MACGREGOR, F.R.C.S. Edin.

Huddersfield, Jan. 13th, 1894.

To the Editors of THE LANCET.

SIRS,—Some recent contributions to the columns of THE LANCET having reference to the administration of anæsthetics in nasal growths, represent in my opinion a very one-sided view of the question, for the inference to be drawn from a perusal of them would be that the administration of an anæsthetic by inhalation is an absolute necessity in naso-pharyngeal operations, and the rock over which your communicants stumble is, whether chloroform, ether, or gas is to be preferred. It must be borne in mind that in the great majority of these cases we have already existing more or less considerable obstruction in the respiratory tract, hence the administration of any of these anæsthetics must never be too lightly undertaken; indeed, in the minor operations, which principally consist of excision of tonsils and removal of adenoid growths, no necessity whatsoever exists for the administration of any anæsthetic by inhalation, provided that a local application of a 10 per cent. solution of cocaine be made to the part a few minutes before operation. In the hands of a skilful surgeon rapidity of execution is attained, and the operation becomes practically a painless one. It is well known that deaths have occurred with both ether and chloroform. The advocates of gas make much of this fact, together with the statement as to "the complete safety and efficiency of nitrous oxide gas in these operations."[1] That no fatal cases have occurred during the administration of gas I am quite prepared to admit, but no mention is ever made of the number of narrow escapes during its administration. At the present moment I am able to recall two cases in which, during the administration of gas for excision of tonsils, in consequence of the sudden asphyxiation of the patient, the administration had of necessity to be suspended, the operation relinquished, and inversion of the patient with artificial respiration to be performed. Appended are a few simple practical rules which are applicable in these cases. 1. In the majority of cases involving operation in the naso-pharyngeal region an anæsthetic is absolutely unnecessary (except the local application of a solution of cocaine). 2 If in the opinion of the surgeon total anæsthesia be absolutely necessary, its administration should never be lightly undertaken. Restoratives and tracheotomy instruments should always be to hand in case of need. 3. Never anæsthetise without first securely "propping" open the mouth. 4. If the operation is likely to be but of short duration preference should be given to nitrous oxide gas. 5. If the operation be a more serious one, involving prolonged anæsthesia, then the choice between chloroform, ether, or other anæsthetising agent must be made according to the ordinary rules which regulate the choice and administration of anæsthetics.

I am, Sirs, yours faithfully,

W. E. REDMAN, M.R.C.S. Eng.

Hornsey-road, N., Jan. 15th, 1894.

"THE DETERMINATION OF SEX."

To the Editors of THE LANCET.

SIRS,—Dr. Heywood Smith's interesting letter on the above subject, which is published in the last issue of THE LANCET, raises a point which, if I may be allowed to say so, I had considered when formulating and enunciating my theory of sex. Dr. Smith's contention that we do not know the time of extrusion of the ovum from the ovary *quâ* purely menstrual phenomena is, of course, an observation which cuts both ways; but I fail to see how, on any theory as to the mere time of its escape from the ovary, an ovum passing down the tube or finding its way into the uterine cavity can logically be assumed to be stronger and fuller of vitality than one just ripened and extruded. As far as my biological studies extend, I can find no evidence by way of supporting Dr. Smith's idea that the ovum after it leaves the ovary undergoes development, or, in his own words, becomes "an ovum of a higher evolution," and "attains a more mature stage." I confess this view is new to me, though I have heard of theories which represent the discharged ovum (a living cell, no doubt) as feeding and nourishing itself on some mysterious pabulum or other it is supposed to find in the genital passages. In my view, the escaped ovum is a specialised cell, waiting and ready to have its specific developmental energies brought into action by one process only—namely, fertilisation. To assume that this cell undergoes a further evolution in structure or function, as Dr. Smith suggests, after its escape from the vesicle in which it has been matured is a most ingenious view of things, but one, I venture to think, unsupported by any physiological evidence whatever. May I be permitted to thank Dr. Smith for his courteous references to the views I have enunciated? His criticisms are of welcome character and of a kind which can have no other effect than that we are, I hope, all aiming at—namely, the discovery of the truth regarding this intricate and important problem.—I am, Sirs, yours truly,

Edinburgh, Jan. 13th, 1894. ANDREW WILSON.

P.S.—The annexed extract is from the *New York Medical Record* of last month. I may add that I have never heard of Dr. Abbott's theory till now:—"*Pre-natal Determination of Sex.*—Dr. George Abbott, of Hamburg, N.Y., writes: 'Last summer I met with two cases near each other very confirmatory of my old-time observations and theory relative to the "determination of sex," and seeing a report from Dr. McAllister, of Driftwood, Pa., in point in your number of Dec. 2nd, 1893, I will at once send them to you. About the middle of May last Mr. L—— called to engage me to

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[1] THE LANCET, Jan. 6th, 1894, p. 64.

attend his wife in confinement, which was expected about the 26th or 28th inst., reckoning 280 days from her last menstrual period. In the conversation I learned that their only intercourse had occurred some ten days later, and that no intercourse nowhere near that time previously nor for weeks afterwards had occurred. On the strength of that assurance I told him his wife would not be likely to be confined until near two weeks later, and that he then would have a daughter, a prospect that pleased him much, as he then had several sons. I set 280 days from the date he gave me as the time of conception as her time for confinement, and on that date I delivered her of a daughter. Shortly after I was called to attend a primipara, who gave me the following history. She was taken unwell Oct. 16th, 1892, was married the 17th, and believed herself to have conceived the 23rd, being about the fourth day following the cessation of menstruation. I diagnosed a case of false alarm, and assured her that her full time would not be up until a week from the following Friday, when she should be confined and delivered of a daughter. On the day predicted I was again called, and delivered her of a daughter. I noticed a report from a doctor in Ohio, whose name and address I have lost, in your journal some months since, also confirmatory of the same theory—viz., that conceptions just previous to the menstrual period result in boys; and if just after, in girls. I wish more doctors would note and publish their observations when the facts are reliable.' "

To the Editors of THE LANCET.

SIRS,—It is probable that in the higher mammalia the causes which determine the sex of offspring are much the same. Mr. Andrew Wilson, in THE LANCET of the 30th ult., gives some interesting facts relating to births among human beings. These, however, are perhaps the only mammals among which sexual intercourse takes place at all seasons of the year and at all times between the menstrual periods of the female. Therefore I venture to say that Mr. Wilson's data do not help us much to a conclusion as to what are the factors determining sex of offspring among the mammalia as a whole. Mr. Wilson says that the ovum is at its highest condition of nutrition immediately after it leaves the ovary and that if fertilised then the resulting offspring will be a male. This theory—i.e., excess of nutrition resulting in males—is, I need hardly add, in direct opposition to the opinions of several workers on the subject. For the year 1889 I collected details of the births of 5000 dogs. As probably most people know, the bitch will not receive the dog till some days after her period of heat has commenced, and breeders generally do not allow the male to serve till the female's discharge has practically ceased, yet male births are considerably in excess of female. I compared the proportion of male to female births month by month from January to December, 1889 On the hypothesis that all favourable circumstances (excess of nutrition of ova among them) tend to femaleness, it was conceivable that the proportion of females would rise during the late spring and summer months; and this I found to be the case. To every 100 males there were born in January 83 females. Plotted on a chart the female curve is seen to rise fairly evenly up to September, in which month the sexes are about equal. In October the females drop to 89. In November they remain about the same. December sees the proportion rather lower than in January. Again, by the same hypothesis we might fairly surmise that we should see the proportion of females gradually increase in human births during the last forty or fifty years. The poor—and they form the bulk from which the statistics are taken—have been gradually better housed, better fed, less worked, as time went on. I consulted the Registrar-General's Reports for 1845–1883 for England. The curve for males descends fairly evenly year by year from $105\frac{5}{6}$ in 1845 to $103\frac{1}{6}$ in 1883. In one issue of the report (I forget which) the Registrar-General makes the remark that the excess of male births appears to be gradually lessening, and is at a loss for the reason. I am informed that in the East-end and poorer parts of London the proportion of male to female births is higher than in the well-to-do districts. It is impossible for one person, of course, from the breeding of his own animals to collect a sufficiently large number of details; but as far as my limited experience goes in breeding horses, pigs, dogs and poultry, I am at present in favour of the hypothesis that al favourable circumstances tend to increase the proportion of female births.

I am, Sirs, yours faithfully,

Datchet, Jan. 6th, 1894. T. KEENE.

"SYNCOPE AFTER INFLUENZA."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 6th Dr. Alexander Morison has very rightly questioned the scientific truth of the statement by Mr. Percy Reynolds that the clotting in the very interesting case quoted by him was ante-mortem. As I was present at the necropsy and with Mr. Reynolds examined the heart I can supplement his account. I noticed on removal of the organ that the blood ran out of the great vessels when cut through with more than ordinary fluidity. When the heart was laid open there was little of that "red currant jelly" usually seen filling the cavities when it has stopped in diastole. There was no clot, red in some parts and decolourised in others. The clot that was there on the right side depended, as it were, from its firm attachment in the recesses of the right auricular appendix into the auriculo-ventricular orifice of that side. It was at its attached end harder, and hence, probably, that portion being older, the fibrin had had time to contract before death ensued. On the left side, again, a firm plaque of contracted fibrin interlaced with the columnæ carneæ, but the white pillar which extended well up into the aortic orifice was much softer. Both clots, however, were completely decolourised, and there was no evidence of any settlement of corpuscles in the lower portions of either. This physiological sequence of conditions occurring in both clots, their arrangement and attachment, added to the fact that the pillar-shaped clot was hollow and laminated, are very strong evidence in favour of the process being ante-mortem. The clotting in the right appendix and left apex very probably began some hours before death—before even, perhaps, the patient herself experienced any subjective symptoms; and from what we know of clotting in general it is easy to understand that as soon as the plug of fibrin projected into the main blood stream it acted as an imperfect embolus, producing a rapid thrombosis round it. The condition of the heart muscle was not such as to suggest, much less favour, heart failure, nor did the appearance of the organs give colour to that view. Referring to the clinical account of the case, one finds that she was able to walk down stairs the morning she died, and that she died in extreme agony—probably anginal. This is not at all the picture of a case of gradual cardiac failure; may it not be one indicating a foreign body in the heart, a series of symptoms not yet clearly recognised? Since this necropsy I have had under my care two cases of threatened syncope after influenza. The first one was a woman aged seventy years, who had by no means a severe attack of influenza save for the pains in her limbs, yet for two days she was in imminent danger of fatal syncope, which was only averted by absolute rest and a free use of stimulants. In the other case a woman aged fifty years walked into the consulting-room with marked dyspnœa. Her aspect suggested pneumonia, yet she had no raised temperature and her lungs were normal. Her heart was, however, beating extremely feebly and irregularly. Her dyspnœa was cardiac. She was at once put to bed and ordered stimulants and digitalis, and in two days she was out of danger. She, too, had had pains in her limbs and head, with shivering and slight fever a few days before, but not enough to lay her up. Comparing these cases with that of Mr. Reynolds we see that, while all three had had undoubted influenza of a mild type, his alone did not present the ordinary clinical picture of cardiac failure with its feeble and fluttering heartbeat, dyspnœa, and sense of impending death.

I am, Sirs, faithfully yours,

A. BUTLER HARRIS, M.A., M.B., B.Ch. Oxon.,
Senior Resident Medical Officer, Stamford-hill and Stoke Newington, &c., Charitable Dispensary.

Jan. 9th, 1894.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Sanitary Condition of Dublin.

A MEETING of gentlemen interested in the drainage of Dublin was held at the Shelbourne Hotel on the 9th inst. to consider the sanitation of the city. Mr. Battersby, who convened the meeting, said that the carrying out of the main drainage scheme would not make the city healthy, and that the first essential was the prevention of leakage into the subsoil from domestic drains and street sewers. The old brick drains leaked, and the sewage soaked into the subsoil, and consequently it did not matter what was done two or three miles away from the city; but if proper drains and pipes were

constructed disease would be prevented once for all. Alderman Maguire proposed that the corporation should take steps to compel every householder to have a perfect connexion made between his house and the public sewers. Thousands of these cross-drains, he said, were leaking into the subsoil. Mr. Battersby pointed out, however, that the corporation had already ample powers under the Public Health Act of 1878, which provided that the sanitary authority might, in the case of insufficient drains, compel the owner or occupier to make them sufficient. Other speakers having taken part in the proceedings, a resolution was adopted that a meeting of the citizens should be held for the purpose of considering the main drainage scheme and the sanitation of Dublin at a date to be subsequently decided, and that the Lord Mayor be asked to give the use of the Mansion House for such meeting and to preside thereat.

Coombe Lying-in Hospital.

Mr. Hoey, late master of this institution, it is stated, is about to take legal proceedings against the *Irish Daily Independent* Printing and Publishing Co. for alleged libel published by the company in reference to the plaintiff.

Medical and Scientific Society, Catholic University Medical School.

A meeting of this society was held on the 15th inst. There were a number of pathological specimens exhibited, and the following papers were read:—Notes on the Ardlamont Case, by the Vice-President (Dr. Roche); Treatment of Cholera, by Mr. Devitt; the Treatment of Enlarged Prostate, by Dr. Staunton; and Elephantiasis, by Mr. Halligan.

Neglect of Vaccination in the Cork Union.

Dr. Brown, Local Government Board inspector, has drawn the attention of the guardians to the inefficient manner in which the vaccination laws are enforced in several dispensaries of this union, as shown by the great number of defaulters and the imperfect manner in which these defaulters are inquired after by relieving officers. He requested the guardians to appoint an official, whose duty it would be to inquire after and prosecute defaulters, as the work could not be properly done by the relieving officers in consequence of the nature and extent of their duties. The inspector wished the guardians to understand that, in view of the recent outbreak of small-pox in England, they should administer the provisions of the Vaccination Acts as carefully and efficiently as possible. The relieving officers were brought before the board and informed that the board would insist on the strict discharge of their duties in carrying out the provisions of the Vaccination Acts, and should there be any default on their part in this respect their services would be dispensed with.

Jan. 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Application of the New Law regulating the Practice of Medicine.

THE new enactment concerning the practice of medicine in France came into operation on Dec. 1st, 1893. Practitioners are evidently supposed to glean information regarding the new regulations from the columns of the public press, for no individual notice in circular form has been supplied to them as to the formalities necessary to put themselves *en règle*. It will consequently not surprise anyone to be told that only a small fraction of the medical men of Paris had a week ago registered their diploma of Doctor of Medicine at the *greffe* of the Civil Tribunal (Palais de Justice). When I presented myself, the very courteous official said, with a smile, "Vous n'êtes pas le dernier, Monsieur." It appears that the weeding out of practitioners unprovided with the necessary qualification has already commenced, for a German practitioner has received a notification from the Prefecture of Belfort to discontinue the practice of his profession on French territory.

Compulsory Notification of Infectious Diseases "un fait accompli" in France.

On Dec. 30th, 1893, there appeared in the *Journal Officiel* the Ministerial Decree fixing the list of infectious diseases that must henceforth, once the diagnosis is made, be reported to the authorities by Doctors of Medicine, *officiers de santé*, and *sages-femmes*. Postal cards will be supplied gratuitously to each practitioner. On the card must be filled in the name of the malady and precise directions regarding the situation of the infected premises. The declaration must be dated, and a delicate provision is made enabling the practitioner to avoid direct mention of the name of the malady, which will be indicated only by a number (a list of maladies with their corresponding numbers is supplied on the first page of the *carnet*). The medical man is not obliged to sign his declaration, a number printed on each leaf of the *carnet* sufficing to distinguish his identity; nor need the name and address of the patient be filled in should the informant be able to give sufficiently explicit directions for finding the house infected. A small space is reserved in the declaration sheet for the (optional) mention by the medical attendant of the appropriate sanitary measures that should in his judgment be taken. In the country districts the declaration must be sent to the mayor of the commune and to the subprefect, in chief towns to the mayor of the arrondissement and to the prefect, and in Paris to the mayor of the arrondissement and to the prefect of police. Negotiations are now being conducted between the Minister of the Interior and the Minister of Commerce as to the free postage of the declarations. Each book supplied to practitioners will contain twenty double declaration forms. The list of declarable diseases is as follows: typhoid fever, typhus fever, small-pox and modified small-pox, scarlet fever, diphtheria (including croup), sweating sickness, cholera and choleraic diseases, pest, yellow fever, dysentery, puerperal fever (excepting when professional secrecy as to the existence of pregnancy has been claimed by the patient), and ophthalmia of the newly born. It will be noticed that measles, rubeola, chicken-pox, mumps, scabies, and ringworm are absent from the list.

General and Physician.

Such a combination of callings as the above-mentioned is a great rarity, and that is sufficient excuse for my mentioning it in the columns of THE LANCET. The combination is found in the person of General Canonge, who has just been promoted from the Colonelcy of the 139th Regiment of Infantry to Brigade rank. The gallant general, who is said to be a very capable officer, passed all his medical examinations when he was a young subaltern.

Deaths of Drs. Quinquaud and Diday.

The disappearance from among us of the above-named physicians merits a brief notice in THE LANCET. Dr. Quinquaud was *professeur-agrégé* of the Paris Faculty and physician to the Hôpital St. Louis. He will be long remembered by his researches on the chemistry of the blood, respiration, and nutrition in pathological conditions. A sure diagnostician, he followed worthily in the footsteps of his master, Bazin, and became a recognised authority in dermatology. In 1891 he was elected a member of the Academy of Medicine. Dr. Diday of Lyons—a household name with syphilographers—died in that town on the 8th inst., aged eighty-three years. As an *interne* in Paris he was the contemporary of Nélaton, Denonvilliers, Hardy, Dechambre, and other well-known men, his masters being Blandin and the famous Dupuytren. He did not make Ricord's acquaintance until later, when he was installed as surgeon of the Antiquaille Hospital of Lyons. Notwithstanding divergencies of view concerning their common study—syphilis—the two authorities remained firm friends, and it was Diday who represented and spoke for the provinces at the funeral of Ricord. His principal works were "Traité de la Syphilis des Nouveau-nés," "L'Histoire Naturelle de la Syphilis," and "Thérapeutique des Maladies Vénériennes." His mental activity was extraordinary, and proof of this is furnished by the fact that only a week before his death he addressed to his medical attendant in the *Lyon Médical* some verses on the disease from which he was suffering.

Gratuitous Vaccination in Paris Hospitals.

The Assistance Publique has organised a system of public gratuitous vaccination in the following hospitals at certain stated hours: Bichat, Hôtel-Dieu, Saint-Antoine, Tenon, Lariboisière, Cochin, Laennec, Andral, Pitié, Beaujon, Saint-Louis, and the Charité. It will thus be seen that if small-pox becomes prevalent in Paris it will not be the fault of the authorities.

Pathogenesis of Glaucoma.

Dr. Galezowski[1] states that one of the most constant

[1] Académie de Médecine, Jan. 9th, 1894.

alterations found in glaucoma is an obliteration of the canal of Schlemn and of the subsclerotic lymphatic channels generally. The optic nerve failing to receive a proper supply of nutritive fluid, becomes excavated and atrophied. The varieties (acute, chronic, hæmorrhagic) own the same cause, the particular variety depending on the degree of obliteration. The treatment is obvious—sclerotomy.

Jan. 16th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Bacteriology of Pertussis.

COHN AND NEUMANN[1] examined the expectoration of twenty-four cases of whooping-cough in children from one to ten years of age, all typical examples of the disease. The sputum at the end of a spasm was received in a Petri glass, thoroughly washed with distilled water, and a small portion was dried and stained with carbolic methylene-blue. The most noteworthy discovery was a small diplococcus, which, however, was not present with sufficient regularity to justify the assumption that it was the specific germ of the disease.

Pfeiffer's Influenza Bacillus.

Borchardt[2] reports the result of the examination of the sputum from a number of cases of influenza in the Urban Hospital, Berlin. The expectoration was washed and then stained with dilute Ziehl's solution; in the great majority of cases, both with bronchitis and with broncho-pneumonia, the bacillus of Pfeiffer was found; in some instances it was found together with other micro-organisms, and in others in almost pure culture. By spreading small portions of sputum on blood-agar Borchardt succeeded in obtaining characteristic cultures of the bacillus. The attempt to get cultures of the bacillus from the blood of patients suffering from influenza was not successful. In one case where the diagnosis between typhoid fever and influenza was doubtful a microscopic examination of the sputum showed Pfeiffer's bacillus, and the course of the case justified the diagnosis of influenza, which was made on the strength of the microscopical examination. In the same communication Borchardt reports that the result of a similar examination of the sputum from cases of acute lung disease at a time when no influenza was prevalent was to show the complete absence of the bacillus which Pfeiffer has described as characteristic of influenza. The epidemic of influenza is decreasing generally in Germany. It is only present severely now in some parts of the south. The Reichs-Gesundheitsamt will prepare a report on the epidemic in the empire during the year just ended.

The Blood in Lobular Pneumonia.

Professor Monti and Dr. Berggrün[3] have written a paper on this subject. Nine cases are reported with the following conclusions. The specific gravity of the blood rises during the rise and progress of pneumonia, and sinks or remains steady as soon as the inflammation has reached its greatest intensity. The fall of the specific gravity occurs at a time preceding the critical fall of the temperature, and before the local physical signs of resolution can be detected. There does not appear to be any further relationship between the rise of temperature and the rise in specific gravity, except that they occur together. The development of pneumonia at once causes a leucocytosis which increases with the spread of pneumonia, and the greater the extent of pneumonia the greater the amount of the leucocytosis; but this decreases directly resolution sets in, rapid decrease indicating rapid resolution and *vice versâ*. A constant relationship between the height of the temperature and the degree of leucocytosis could not be made out.

Professor Heubner.

Professor O. Heubner of Leipzig has accepted the Professorship of the Diseases of Children in the University of Berlin.

Jan. 16th.

[1] Archiv für Kinderheilkunde, Band xvii., Hefte 1-11.
[2] Berliner Klinische Wochenschrift, No. 2, 1894.
[3] Archiv für Kinderheilkunde, Band xvii., Hefte 1-11.

MR. O. LOWSLEY, public vaccinator for Reading, has received from the Local Government Board the sum of £67 18*s.* for efficient vaccination for the years 1892-93.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Puerperal Fever at the Lying-in Hospital, Sydney; Resignation of the Staff.

THE lying-in hospital maintained by the Benevolent Society of New South Wales is carried on in a building other parts of which are used as a general hospital and benevolent asylum, and which is in every way totally unsuitable. In July last an outbreak of puerperal fever occurred in the institution, which subsided on Sept. 23rd, only to be followed by another outbreak at the beginning of November. The medical staff, consisting of Dr. Warren (medical officer) and Drs. Marano and Woodward (honorary medical advisers), have now resigned, as the advice given by them to the board of directors on former occasions has not been carried out, and they are of opinion that under the existing conditions another outbreak of puerperal fever is very probable. They trace the last outbreak to a case of scarlet fever and declare that it is highly improper that pregnant and puerperal women should be subjected to risk by the admission to the institution of children from all parts who are liable to develop infectious disease shortly after admission. They state that the buildings are unsuitable for a lying-in hospital for the following reasons: "(1) the great age of the buildings; (2) the unsuitability of the materials used in the construction of the floors, ceilings, and to a certain extent of the walls; (3) the surface of the ground underneath the flooring is not rendered impermeable by asphalt or some other material; (4) the very close proximity of an old burial ground; (5) the great size of the wards; (6) the insufficient cubic air space and floor space for inmates; (7) unscientific ventilation; (8) no facilities for using lying-in wards in rotation; (9) no separate delivery-room is provided; (10) the water-closet accommodation is in too close proximity to the wards; and (11) the insufficient means of isolating patients, nursing staff, and inmates generally."

Milk Poisoning.

At a recent meeting of the Victorian Branch of the British Medical Association Dr. Gray, assistant medical inspector to the Board of Health, read a report on two cases of fatal poisoning which he ascribed to milk. The patients were aged respectively three years and seventeen months; they were taken suddenly ill about the same time, though in different families, with somewhat similar symptoms—vomiting, excessive thirst, restlessness, and finally collapse. To these were added in one case convulsions, in the other purging. The duration of the illness was about the same and also the post-mortem appearances, which were almost *nil*, except congestion of the stomach and intestines. The only food in common supplied to the two children was unboiled milk obtained from the same dairy, and taken just prior to the attack in each case. The amount of milk per head taken by other customers of the same dairy was very small, and was mostly used boiled in tea or puddings; of ten children under the age of five years who partook of the milk on the same date only two—the patients—had it when not boiled or scalded. The dairy itself was in a most insanitary condition, the cows being milked in a shed in which in wet weather they stood up to the udders in liquid filth. The water used for dairying purposes was taken from an underground tank, and was found on analysis to be most impure. After an interesting discussion a resolution was passed affirming the belief of the meeting that the cases were due to milk-poisoning; drawing public attention to the fact that a fatal poison may be developed in milk; recommending householders not only to boil their milk, but to make inquiries into the sources of its supply; and suggesting that all purveyors of milk should be compelled by law to produce, on demand by customers, a certificate from the local health officer that their business arrangements are satisfactory.

Opening of the new St. Vincent's Hospital, Melbourne.

The new St. Vincent's Hospital, Melbourne, founded by the Sisters of Charity, was formally opened on Nov. 6th, 1893, by Lady Clarke in the presence of a large and fashionable gathering of ladies and gentlemen connected with almost every denomination. The Roman Catholic Archbishop of Melbourne presided, and expressed regret at the unavoidable absence of his Excellency the Governor, who was to have performed the ceremony, but was detained by the prorogation of Parliament on the same day. The following have been appointed to the

honorary staff:—Consulting Physician, Sir Anthony Collin Brownlees; Consulting Surgeon, Mr. J. N. FitzGerald; Physicians, Dr. J. R. MacInerney, Dr. Patrick Moloney, and Dr. F. W. Morton; Surgeons, Mr. G. A. Syme, Mr. R. A. Stirling and Mr. M. U. O'Sullivan (diseases of women).

Electoral Reform at the Melbourne Hospital.

At a recent meeting of the committee of the Melbourne Hospital it was decided that for the time being the committee should appoint the lecturers on medicine and surgery at the University respectively physician and surgeon to the hospital; also that no subscription should entitle to a vote at a meeting within nine months from the date of its payment. These alterations will have to be ratified by the subscribers.

Obituary.

JOHN BURNLEY WALKER, M.D., C.M. EDIN.

EDINBURGH men of the earlier seventies will remember a dark-haired, somewhat sallow, Yorkshireman, of an open, friendly disposition, who was ever ready to help his fellows practically or with advice. Going up in the winter session of 1868-69, John Burnley Walker missed his second winter, having been attacked with typhoid fever. After a tedious illness he went down for the rest of the winter session. He thus resumed his studies with those who began theirs a year later than himself, and could claim as "men of his year" a double set of fellow-students. Busily working in the wards of the old Infirmary, an energetic member of the University Rifle Corps, and a regular attendant at the debates of the Royal Medical Society, he will be mourned by not a few, not only as a class-mate but as a friend. Graduating as Bachelor of Medicine in 1875, he was offered, and had accepted, the post of resident surgeon in Mr. Lister's wards, when, a favourable opening having occurred in his native village, he, in deference to his father's wishes, threw up the offered appointment and settled down at once to country practice. In this direction he was rapidly successful and in a few years was widely known amongst the manufacturing villages of the Yorkshire Colne as a ready, reliable, and painstaking practitioner. Nor was it in his professional capacity alone that he served his fellow townsmen; he took an active interest in all public matters. As member of the School Attendance Committee, and as member, and afterwards chairman, of the Golcar Local Board, he exercised an important influence in his own and neighbouring villages. Later, when Dr. Maclintock left Marsden for Bradford, Dr. Walker resigned the chairmanship of the Golcar Board in order to become the medical officer of health to the combined districts of the Colne Valley. From the first he had shown a lively interest in sanitary matters. His thesis for his M.D. degree in 1875 had been on the subject of typhoid fever, a disease with which he had not only had a painful personal acquaintance, but into close contact with which he had been brought almost as soon as he began practice by the occurrence of a serious outbreak in his own upland village. He used his influence at that time in order to forward an important scheme of drainage, which has since proved to be a great boon to the community. He was the first country member who was elected President of the Huddersfield Medical Society. He chose for his presidential address the subject of the "Medical Man in Literature," and strove to show how outsiders regarded the profession. His communications on the subject of epidemic pneumonia were of interest, but want of time prevented him from preparing them for the press. Ever ready at the call of duty, he was less careful of his health than he should have been. Frequent exposure to the inclement weather on his dearly loved hills, often when already exhausted from overwork, at last told upon a constitution never too strong. Last summer he was altogether laid aside, but recovered so far as to be able to go, on the advice of his brother-in-law, Sir. W. Broadbent, to Bournemouth, a change from which his friends hoped great things. After a certain amount of improvement he set off on a voyage to the Cape of Good Hope and wrote cheerfully to his wife of his condition from Madeira. Unfortunately, however, he did not survive the voyage.

PROFESSOR P. J. VAN BENEDEN.

BELGIUM has lost one of its leading scientific lights in Pierre Joseph van Beneden, Professor of Comparative Anatomy and Zoology in the University of Louvain. Born in 1809 at Malines, van Beneden threw himself with ardour into the medical curriculum of the Louvain school, and in due course graduated as doctor of medicine in that faculty. At the same time his devotion to natural history asserted itself strongly, and he abandoned the career of practice for certain of the branches of medicine in which the study of the lower organisms plays a special part. The development of polypi, of worms, intestinal and vesical, and especially parasitism, engaged his closest attention, and in the last-named department particularly science owes to him the distinction between "commensalisme" and "mutualisme." Concurrently with these studies, the marine fauna interested him deeply, and he enriched the catalogue of cetaceous fossils by several new species differentiated by himself. In 1831 he was appointed Conservator of the Museum of Natural Sciences of Louvain, in 1855 Professor of Zoology in the University of Gand, and in the following year he was transferred to the parallel chair in the University of Louvain—a post he held until his death.

In 1843 at Ostend he established and fitted up at his own expense a laboratory for marine zoology and an aquarium, and in connexion with the former his "reagent" was one of the first and most effective of its kind known to zoological research. In 1853 he competed for and gained the first prize offered by the Institute of France for his "History of the Development of Intestinal Worms," while he was a frequent and esteemed contributor to the "Mémoires" and the "Bulletins" of learned bodies, Belgian and European. Professional literature is indebted to him for his "Zoologie Médicale" (Paris, 1859) and, in the same field, for his "iconographie" of the helminthic and vermiform parasites in the human subject (Louvain, 1860). His indefatigable research is also favourably seen in his great work on the "Osteography of the Living and Fossil Cetacea" (Paris, 1868), as well as in his "Animal Life and its Mysteries," his "Report on the Palæontological Collections in the University of Louvain," and similar monographs of zoological interest, contemporary and prehistoric.

Honours fell upon him thick and fast, chiefly from the learned bodies of Continental capitals, and in 1877 there was published at Gand a "manifestation" in testimony of his scientific services. Eight years ago, on the celebration of his golden wedding, his old pupils and his colleagues in the Universities of Gand and Louvain took occasion to do him special honour at a festival which took place at the latter seat of learning, when reference was made to the circumstance that his gifts are worthily perpetuated in his distinguished son, Dr. Édouard van Beneden, who, born at Louvain in 1846, has already made himself a European reputation for his masterly work in embryology and in the field of microscopic zootomy and histology.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the second examination of the Board in the subjects indicated on Thursday, Jan. 11th:—

Passed in Anatomy and Physiology.—Messrs. Charles Dudley Francis Burney, of Charing cross Hospital; Rowland John Rowland and John Abel Glover, of Guy's Hospital; Hugh Llewellyn Lambert, of St. Bartholomew's Hospital; George Perkins, of the Medical College, Madras; Henry William Trewby and Cadogan Thomas, of Middlesex Hospital; John Lamplough Kirk, of Cambridge University; Charles John Taylor and John Alexander McKinnon, of the University of Toronto, Canada.

Passed in Anatomy only.—Mr. Lewis Lloyd, of University College, London.

Passed in Physiology only.—Messrs. William Ebenezer Waymark, Alexander Henry Finch, Henry Soulbien Desprez, Lewis Thomas Archibald Rowland, and Bradney Instone, of Guy's Hospital; Thomas Bingham Marshall and John Charles Reynolds Robinson, of St. Thomas's Hospital; Herbert James Godwin and Albert Edward Hodgkins, of St. Bartholomew's Hospital; Sydney Robert Walker, of Westminster Hospital; Edward James Parry, of St. George's Hospital. Five gentlemen were referred in both subjects, three in anatomy only, and two in physiology only.

ROYAL NATIONAL LIFEBOAT INSTITUTION.—On the 11th inst. a meeting of the officials and friends of this institution was held at John-street, Adelphi, when silver medals and other marks of distinction were awarded to seamen for their heroic efforts to save life at sea. Rewards to the amount of £987 were also granted to the crews of lifeboats connected with the institution.

KEIGHLEY HOSPITAL.—The extension of this hospital, commenced some time ago, is progressing satisfactorily, and will probably involve an outlay of something like £2000, three-fourths of which has already been raised. The alterations will necessitate an increased annual expenditure in the maintenance of the charity, and the liberality of the subscribers and the general public will in due time be solicited.

THE MONEY VALUE OF AN EYE.—The danger attending the work of bottling mineral water is so well recognised that it has been made incumbent on employers to provide their workmen engaged in this industry with eye-guards. The neglect of this precaution resulted recently in an injury which involved the loss by a workman of one of his eyes. An action was accordingly brought by the sufferer, to whom was awarded damages to the amount of £100.

PROMOTING A LAUDABLE OBJECT.—At the instance of Dr. Thresh, whose object was to promote good fellowship, the medical officers of the Chelmsford union district dined together at the Saracen's Head Hotel on the 11th inst. The senior medical officer of the district, Mr. Wheeler, occupied the chair, and Mr. A. Clarke the vice-chair. The chairman proposed "The Medical Profession," which was responded to by the vice-chairman; "The Visitors," proposed by Dr. Cockey of Waltham, was acknowledged by Dr. Facey of Maldon; the toast, "The Health of the Chairman," was given by Mr. Hart of Great Baddow and warmly received.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting held on Thursday, Jan. 11th, 1894, the following list of office-bearers, members of council, and pathological and microscopical committee was adopted:—President: Chauncy Puzey. Vice-Presidents: J. Armstrong, P. Davidson, C. G. Lee, and J. W. Warburton. Hon. Treasurer: A. Bernard. Hon. General Secretary: W. Macfie Campbell. Hon. Secretary to Ordinary Meetings: C. H. Shears. Hon. Librarian: T. Bushby. Council: J. M. Chisholm, T. B. Grimsdale, Richmond Leigh, Percy Marsh, J. Tawse Nisbet, E. J. Phillips, R. S. Archer, T. R. Bradshaw, J. E. Gemmell, J. M. Hunt, R. Parker, and G. S. Stansfield. Pathological and Microscopical Committee: J. H. Abram, F. H. Barendt, A. Barron, A. W. Campbell, T. B. Grimsdale, G. G. Hamilton, F. C. Larkin, J. R. Logan, R. W. Murray, Frank T. Paul, W. T. Thomas, and J. Wiglesworth. Journal Committee: R. S. Archer, W. Mitchell Banks, F. H. Barendt, James Barr, J. E. Burton, William Carter, J. R. Logan, and W. Permewan. Auditors: T. B. Grimsdale and R. J. Hamilton.

THE ELEVENTH INTERNATIONAL MEDICAL CONGRESS TO BE HELD IN ROME FROM MARCH 29TH TO APRIL 5TH.—Messrs. Thomas Cook and Son of Ludgate-circus, London, have been appointed the official agents for travelling arrangements for the congress, and they have made arrangements for special cheap return tickets to Rome for members of the medical profession and friends attending the meetings. At the request of the central committee they have also arranged to reserve hotel accommodation in Rome for delegates and friends at rates varying from 10*s.* to 20*s.* per day, or higher if superior apartments are required. The fact of the congress being held immediately after Easter renders it difficult to guarantee accommodation at hotels and Messrs. Thomas Cook and Son will not guarantee to provide the same unless they receive application on or before Feb. 15th, stating the number of days for which accommodation will be required, the number of rooms and beds desired and the approximate rate per day that will be paid. They will, however, do their best to meet the wishes of those delegates who cannot give their decision prior to that date. They have also issued a special programme of a select conducted party to leave London on Tuesday, March 27th, travelling *viâ* Dover, Calais, Paris, and Turin to Rome, spending eight days in that city, and returning by the same route, spending Sunday, April 7th, in Genoa, at a specially low and inclusive rate to delegates of £16 5*s.*, providing for all travelling tickets, meals *en route*, and for the eight days' stay in Rome. In addition to the above arrangements, a programme has been drawn up of conducted tours for visiting Sicily, Naples, Vesuvius, Pompeii, Capri, Sorrento, &c., and for three days' excursions in Rome under the leadership of Dr. Russell Forbes, the archæological and historical lecturer on Roman antiquities.

THE FINSBURY DISPENSARY.—The resignation of Dr. J. W. Griffith as physician to this dispensary is announced. Dr. Griffith has held the office for more than fifty years with conspicuous fidelity to his duties.

THE PROPOSED ISOLATION HOSPITAL AT PERIVALE. The proposal by the urban authorities of Acton, Chiswick, and Hanwell to erect a joint isolation hospital at Perivale, near Ealing, has been met with considerable opposition and a Local Government Board inquiry was instituted on Jan. 12th.

MEDICAL MAGISTRATES.—Mr. Wm. Gibson Bott, L.R.C.P. Edin, M.R.C.S., has been placed on the Commission of the Peace for London, and Mr. Francis Clowes, M.R.C.S., and Mr. James Henry Stedman, M.R.C.S., have been placed on the Commission of the Peace for the county of Norfolk.—On the recommendation of his Grace the Duke of Westminster, Lord-Lieutenant of the county, the Lord Chancellor has placed Mr. Alfred Godson, M.A., M.B., M.C. Cantab., of Cheadle, Cheshire, on the Commission of the Peace for the county of Chester.

FOOTBALL CASUALTIES.—On Saturday last the following accidents occurred:—In the game on the Rectory Field, Blackheath, between the home club and the London Scottish, the Blackheath three-quarter-back dislocated his humerus.—During a game in a field near the Ivy House Estate, Leeds, a young man fractured his leg and was taken to the infirmary.—In a match on Clapham Common, between the University College House and Clapham-crescent teams, a youth aged sixteen years fractured one of his legs and was removed to St. Thomas's Hospital.

CORONER'S INQUESTS IN THE COUNTY OF LONDON.—By the annual report presented to the Home Secretary by Dr. Roderick Macdonald, coroner for North-east London, it appears that the total number of inquests held by him during the year was 1130, of which 651 were on males and 479 were on females; 328 inquisitions were held on children under one year of age, of whom 41 were illegitimate. The cause of death was natural in 701 cases; there were 172 cases of accidental death, and 46 suicides; while 113 children were suffocated in bed with their parents. Want and neglect accounted for 9 deaths and excessive drinking for 19. Were it possible by the aid of a vivid imagination to trace the circumstances connected with the foregoing items what a mountain of misery would be represented by these statistics.

THE annual meeting of the Manchester Medical Society was held on Jan. 10th, at Owens College, Dr. C. E. Glascott presiding. Dr. F. A. Southam read the annual report, which showed that the number on the roll of members was now 268, a figure which, by comparison with those of the previous fifteen years, showed only a small advance. The committee felt that the slow rate of increase in the membership was very unsatisfactory when it was considered that the library at the service of the members constituted one of the finest collections of medical books in the United Kingdom, and that the number of medical men in Manchester and its vicinity had lately very rapidly increased. The committee referred feelingly to the death of their distinguished member, Mr. Charles Clay, "the father of ovariotomy." Dr. Dixon Mann was elected president for the year Dr. Glascott treasurer, and Mr. Coates secretary.

A MEETING of the Birmingham and Midland Branch of the Society of Medical Officers of Health was held on Jan. 11th at the Council House, Birmingham, Dr. Boobbyer, medical officer of health of Nottingham, presiding. Dr. G. Reid, medical officer of health for Stafford District, read a paper on a School Outbreak of Inflammatory Sore-throat, which in his opinion could be traced to a foul drain beneath one of the class-room windows. Mr. May, medical officer of health of Aston Manor, contributed notes upon the Notification of Erysipelas and Puerperal Fever, in which he alluded to the difficulty of classifying the latter disease. He thought it should be laid down that all cases of puerperal peritonitis or puerperal metritis should be notified as puerperal fever. Dr. Hill, medical officer of health of Birmingham, spoke highly of the great value of notification in cases of puerperal fever, while Dr. Bostock Hill, medical officer of health of Sutton Coldfield, testified to the comparative unimportance of notifying cases of erysipelas, stating that in Birmingham during the previous year 852 cases had been reported, at a cost to the city of £100, of which only twenty-four had proved fatal.

Parliamentary Intelligence.

HOUSE OF COMMONS.

FRIDAY, JAN. 12TH.

Habitual Drunkards.

THE Home Secretary, in reply to a question put by Mr. Wharton, said that he hoped to be able next session to introduce a Bill dealing with the recommendations of the departmental committee on habitual drunkards.

Mortality from Diphtheria in the South-Eastern Hospital.

Mr. Darling asked whether the attention of the President of the Local Government Board had been called to certain statements which had been made to the effect that of the patients suffering from diphtheria in the South-Eastern Hospital 56·6 per cent. had died, whereas of cases in the same district treated at home only 25 per cent. were fatal.—Sir Walter Foster, in reply, said the hon. gentleman might be quite sure that the matter would receive the requisite attention.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.

The Microscopical Examination of the Human Brain. By Edwin Goodall, M.D.Lond., B.S., M.R.C.S. 1894. pp. 186. Price 5*s.*

DORNAN, W. J., Philadelphia.

Transactions of the American Surgical Association. Vol. XI. Edited by De Forest Willard, M.D. 1893. pp. 372.

FOWLER, L. N., & Co., Ludgate circus, London.

The Child, physically and mentally. By Bertha Meyer. pp. 155. Price 2*s.*

Health and the Various Methods of Cure. By J. H. Rausse. A new translation from the German. 1893. pp. 140. Price 1*s.* 6*d.*

FUNK & WAGNALLS CO., 44, Fleet-street, London.

A Standard Dictionary of the English Language, upon Original Plans. Vol. I. A. L. 1894. pp. 1060.

GOVERNMENT PRINTING OFFICE Washington.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. XIV. Sutures—Universally. 1893. pp. 1016.

KEENER W. T. COMP., Chicago.

Stricture of the Urethra. By G. Frank Lydston, M.D. Illustrated. 1893. pp. 334.

Electricity in Diseases of Women and Obstetrics. By F. H. Martin, M.D. Illustrated. 1893. pp. 278.

The Technique of Post-mortem Examination. By L. Hektoen, M.D. Illustrated. 1894. pp. 172.

KEGAN PAUL, TRENCH, TRÜBNER, & Co., Charing-cross-road, London

The Fauna of the Deep Sea. By Sidney J. Hickson, M.A. (Cantab. et Oxon.). Illustrated. 1894. pp. 169. Price 2*s.* 6*d.*

LEWIS, H. K., Gower-street, London, W.C.

Headache and other Morbid Cephalic Sensations. By Harry Campbell, M.D., B.S. (Lond.). 1894. pp. 410. Price 12*s.* 6*d.*

Infectious Disease, Notification and Prevention. By L. C. Parkes, M.D., Lond., D.P.H. 1894. pp. 185. Price 4*s.* 6*d.*

On Common Neuroses, or the Neurotic Element in Disease and its Rational Treatment. By J. F. H. Goodhart, M.D, Aberd., F.R.C.P. Second Edition. 1894. pp. 135. Price 3*s.* 6*d.*

LONGMANS, GREEN, & Co., London.

Longman's Advanced Science Manuals. Human Physiology. By J. Thornton, M.A. Illustrated. 1894. pp. 440. Price 6*s.*

The Student's Dictionary of Medicine and the Allied Sciences. By Alexander Duane, M.D. 1894. pp. 650. Price 21*s.*

LONGMANS, GREEN, & Co., Paternoster-row, and STEVENS & SONS, Chancery-lane, London.

An Epitome of the Law and Practice connected with Patents for Inventions. By Jas. Johnson, Barrister-at-Law, and J. Henry Johnson, Assoc.Inst.C.E. Second Edition. 1894. pp. 162. Price 2*s.* 6*d.*

NATHAN & Co., 102, Fore-street, London.

By Royal Letters Patent. The Electro-Neurotone Apparatus. Its Use and Application in various forms of Nervous and other Diseases. By the Inventor, T. G. Hodgkinson. pp. 96. Price 3*s.* 6*d.*

SIMPKIN, MARSHALL, & Co., London.

The Great Pestilence (A.D. 1348-9). Now commonly known as "The Black Death." By Francis A. Gasquet, D.D., O.S.B. 1893. pp. 244. Price 7*s.* 6*d.* Net.

SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, Paris.

Le "Gros Mal" du Moyen-Age et la Syphilis Actuelle. Dr. F. Buret. 1894.

VOGEL, F. W., Leipzig.

Atlas der Pathologischen Gewebelehre in mikrophotographischer Darstellung. Von Drs. C. Karg und G. Schmorl. Mit einem Vorwort von Dr. F. V. Birch-Hirschfeld. 1893.

WHITTAKER & Co., White-hart-street, Paternoster-square, and G. BELL & SONS, York-street, Covent Garden, London.

Scholarships and Exhibitions, 1894. The School Calendar and Handbook of Examinations and Open Scholarships, 1894. With a preface by F. Storr, B.A. 8th year of issue. pp. 180. Price 1*s.* net.

Pancreatic Cysts, with Notes of a Case: by L. E. Barnett, F.R.C.S.Eng.; reprint from New Zealand Medical Journal, October, 1893.—Dermatologische Zeitschrift; herausgegeben von Dr. O. Lassar; Band 1., Heft 1 (Williams and Norgate, London, 1894).—The Use of Antiseptics in Midwifery, their Value and Practical Application: by Robert Boxall, M.D.Cantab., M.R.C.P.Lond. (H. K. Lewis, London, 1894), price 1*s.*—Liebig Company's Practical Cookery Book: compiled by Mrs. H. M. Young (Liebig's Extract of Meat Company, Fenchurch-avenue, London, E.C.), price 1*s.*—The Open-air Treatment of Phthisis: by W. B. Thorne, M.D., M.R.C.P. (J. and A. Churchill, London, 1894), price 6*d.*—The Mental Symptoms of Myxœdema and the effect on them of the Thyroid Treatment: by T. S. Clouston, M.D.; reprint, (South Counties Press, Lewes).—The Lunacy Administration of Scotland, 1857-1892: by T. S. Clouston, M.D.; reprint from American Journal of Insanity, October, 1893, Utica, New York.—Health and High Pressure in Business, with a few words on the proposed Compulsory Early Closing of Shops: by T. Thatcher (T. Thatcher, College-green, Bristol, 1894).—Report of the Mansion House Committee, appointed 31st Oct., 1893, to investigate the existence of distress in London, caused by lack of employment, and to consider the best means of dealing with it (The Ideal Publishing Union, Memorial Hall, Farringdon-street, E.C., December, 1893), pp. 147.—The Quarterly Medical Journal for Yorkshire and adjoining Counties; January, 1894; Vol. 2, Part II. (J. Bale and Sons, London), price 2*s.*—Monte-Carlo considered as a Health Resort: by T. H. Fagge, M.D., M.R.C.S., L.R.C.P.; reprint (the Army and Navy Coöperative Society, Victoria-street, Westminster, S.W.).—Annus Pharmaceuticus, 1893; reprint from The Pharmaceutical Journal, Jan. 6th, 1894.—De la Contagion de la Folie: par le Dr. de Boeck, Brux. (Imprimerie Eug. Vanderhaeghen, Gand, 1893).—Revue des Sciences Médicales en France et à l'Étranger; No. 85, 15 Janvier, 1894 (G. Masson, Paris).—The Psychological Review, January, 1894; Vol. 1, No. 1 (Macmillan and Co., London).—Patent alias Quack Medicines; reprint from Hygiene (Beaumont and Co., 115, Strand, London), price 6*d.*

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANDERSON, J. W., M.D.Glasg., C.M., F.F.P.S., has been appointed Honorary Physician to the Glasgow and West of Scotland Coöperation for Trained Nurses.

BARBER, P. E., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer of Health for the Rural Sanitary District of the Wortley Union, vice Browning, resigned.

BENSON, J. H., M.B., F.R.C.P., L.R.C.S Irel., has been appointed a Consulting Physician to the City of Dublin Hospital.

BRICK, M., L.R.C.P., L.M., L.R.C.S.Irel., has been appointed, *pro tem.*, Medical Officer of the Tralee Dispensary District.

BROWN, CHARLES, M.D.Edin., C.M., has been appointed Parochial Medical Officer, Dunblane, vice T. Brown.

CLARK, H. C., L.R.C.P.Edin., F.F.P.S.Glasg., has been appointed Honorary Surgeon to the Glasgow and West of Scotland Coöperation for Trained Nurses.

GÜNTHER, THEODORE, M.D., Tübingen, L.R.C.P.Lond., has been re-appointed Medical Officer of Health for Hampton Wick.

LEACH, JOHN, M.A., M.B., C.M. Aberd., has been appointed House Surgeon to the Southern Hospital for Women and Children and Maternity Hospital, Manchester.

MASON, WILLIAM, L.R.C.P., L.M., L.R.C.S.Edin., has been appointed, *pro tem.*, Medical Officer for the St. Austell Workhouse, vice Phillips, resigned.

MODLIN, J. GIBSON, M.B., B.S. Dunelm., L.S.A. Lond., has been appointed Medical Officer for the Monkwearmouth East District of the Sunderland Union, vice L. Blumer, resigned.

NEWMAN, DAVID, M.D.Glasg., F.F.P.S., has been appointed Honorary Surgeon to the Glasgow and West of Scotland Coöperation for Trained Nurses.

PERRY, ROBERT, M.D Glasg., F.F.P.S., has been appointed Honorary Physician to the Glasgow and West of Scotland Coöperation for Trained Nurses.

PRESTON, J. R., M.R.C.S. Eng., L.R.C.P.Lond., has been appointed House Surgeon to the Jessop Hospital for Women, Sheffield.

READ, MARYN, M.D Camb., D.P.H., M.R.C.S., has been appointed Honorary Physician to the Worcester Infirmary.

ROCKETT, P. J., M.B., C.B.Melb., has been appointed Medical Officer for the Local Board of Ringarooma, Australasia.

TRAQUAIR, JAMES H., M.B., C.M. Edin., has been appointed Junior Assistant Medical Officer to the Staffordshire County Asylum, Burntwood, Lichfield.

WALLIS, F. C., M.B. Cantab, F.R.C.S., has been appointed Surgeon to the Orthopædic Department at Charing-cross Hospital.

WILLS, W. A., M.D. Lond., M.R.C.P., has been appointed Physician to the North-Eastern Hospital for Children, Hackney.

WITHERS, J. S., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Sale Urban Sanitary District.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

AXMINSTER UNION.—Medical officer for each of the following districts, at the undermentioned annual salaries, which will include the costs of drugs, &c.—viz.: Dalwood; salary, £12 8*s.* 4*d.*—Kilmington; salary, £12 8*s.* 4*d.*—Membury; salary, £22 18*s.* 4*d.*; and Stockland; salary, £25 6*s.* 8*d.* Applications to the Clerk, Axminster.

BRADFORD INFIRMARY.—Dispensary Surgeon. Salary £100 per annum, with board and residence.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Rooms, coals, and lights provided.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £100 per annum, with board and lodging.

EAST-END BRANCH OF THE CHILDREN'S HOSPITAL, Sheffield.—House Surgeon. Salary £70 per annum, with board, lodging, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Assistant House Surgeon (non-resident) for six months. Salary, £20.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Board and lodging provided.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—Resident Clinical Assistant for six months. Applications to the Secretary, 27, Clement's-lane, E.C.

PARISH OF LAMBETH.—Assistant Medical Officer and Dispenser for the Infirmary in Brook-street, Kennington. Salary £125 per annum, with board, apartments, and washing. Midwifery and special operations extra. Applications to the Clerk, Guardians' Board-room and Offices, Brook-street, Kennington-road, S.E.

PARISH OF ROUSAY AND EGILSHAY, ORKNEY.—Medical Officer (resident) for the Parish of Rousay and Egilshay. Salary £51 sterling per annum. Applications to Inspector of Poor, Rousay, Orkney.

ROYAL SOUTH LONDON DISPENSARY, St. George's-circus, S.E.—Surgeon-in-Ordinary, to visit patients at their own homes in the Waterloo District. Honorarium £20 per annum.

STOCKPORT INFIRMARY.—Junior House Surgeon for six months, with board and residence. An honorarium of £10 will be given after six months' satisfactory service.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.—Lecturer on Bacteriology. Particulars obtained from the Dean, Mr. Spencer.

Births, Marriages and Deaths.

BIRTHS.

COLLIER.—On Jan. 8th, at St. Mary's Entry, Oxford, the wife of Wm. Collier, M.D., F.R.C.P., of a daughter.

MORRISON.—On Dec. 26th, at Toorak, Melbourne, Australia, the wife of R. H. Morrison, M.B., C.M., of a son.

MURDOCH.—On Jan. 11th, at St. John's-road, Annan, Dumfriesshire, the wife of William Murdoch, M.D., of a daughter.

POOCK.—On Jan. 10th, at 8, Buckingham Palace-road, S.W., the wife of E. Poock, Dental Surgeon, of a daughter.

PRITCHARD.—On Jan. 8th, at Carolgate, East Retford, Notts, the wife of Trevor J. Pritchard, M.B., of a daughter.

SMITH.—On Jan. 10th, at 52, Camden-square, London, N.W., the wife of J. Burnett Smith, M.B., of a daughter.

MARRIAGES

ARDAGH—WHITE.—On Jan. 9th, at Chapel of Wilson's Hospital, Multyfarnham, Vernon Langley Ardagh, M.B., son of the late Robert Ardagh, Esq., of Pouldren, county Waterford, to Matilda Lucie Hilda de Vere, eldest daughter of the Rev. Hill Wilson White, D.D., Wardenof Wilson's Hospital, Heathlands, county Westmeath.

BATE—DUTTON.—On Jan. 16th, at St. Cuthbert's, Kensington, George Bate, M.R.C.S.E., L.S.A. (late R.N.), to Mary Anne (Annie), third daughter of the late Dr. James Dutton, of London, W.

DUFF—SMITH.—On Jan. 11th, at St. Mary's Church, Putney, Charles Edmund Duff, M.B., fifth son of Lieutenant-Col. Duff, Knockleith, Turriff, Aberdeenshire, to Mary Susan, elder daughter of the late Archibald Smith, Esq., of Jordanhill, Renfrewshire, Barrister-at-law.

GERVIS—DEATH.—On Jan. 10th, at the Congregational Church, Bishop's Stortford, Henry Gervis, M.A., M.B., of Windhill-place, Bishop's Stortford, to Matilda Martha Death, of Netteswell House, Bishop's Stortford, youngest daughter of the late William Death, Esq., of Burnt Mill, Essex.

STEPHENSON—LACEY.—On Jan. 15th, at St. Saviour's, Southwark, Frederick John Orchard Stephenson, M.R.C.S., L.R.C.P., eldest son of the late Major-General F. J. Stephenson, B.S.C., to Hilda, the second daughter of the late John Lacey, Esq., surgeon, Southwark.

DEATHS.

BARTON.—On Jan. 9th, at Donnington-square, Newbury, Berks, the Rev. Thomas Barton, B.A., M.B. Cantab, in his 81st year.

CLARK.—On Jan. 14th, at Lancaster, Robert Clark, L.R.C.P., L.R.C.S., aged 41.

HUTCHINSON.—On Jan. 11th, at 35, Clanricarde gardens, W., Surgeon-General R. F. Hutchinson, M.D. (retired), Indian Medical Service, aged 62.

MILLER.—On Jan. 16th, at 53, Bedford-gardens, Kensington, Robert Miller, M.D., aged 87.

MYERS.—On Jan. 10th, at 2, Manchester-square, W., Arthur T. Myers, M.D., F.R.C.P., aged 42 years.

PAINE.—On Jan. 15th, at his residence, Elmsfield, Cardiff, Henry James Paine, M.D., in his 78th year.

REID.—On Jan. 11th, at Brussels, Thomas Bassett Reid, Brigade-Surgeon English Army (retired).

SCOUGAL.—On Jan. 14th, Edward Fowler Scougal, M.A. Aberd., M.D., C.M. Edin., of Marsh Wood-road, Huddersfield, Yorkshire, aged 38.

SHAW.—On Jan. 13th, at Colney Hatch Asylum, Hugh Grosvenor Shaw, M.R.C.S., one of the Resident Surgeons at the Asylum, aged 32.

THURSFIELD.—On Jan. 16th, at 342, Uxbridge-road, Thomas Greville Thursfield, M.D., aged 52 years.

WAGSTAFF.—On Jan. 16th, at Leighton Buzzard, Philip Wynter Wagstaff, M.R.C.S., L.S.A., aged 83 years.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), (St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Great Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Great Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Chelsea (2 P.M.), Soho-sq. (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Mr. Pearce Gould: Nine Inches of Rubber-tubing removed from the Bladder of a Man.—Mr. Ballance: (1) Two cases of Fractured Patella; (2) A case of Removal of Meckel's Ganglion.—Dr. Morgan Dockrell: (1) Mycosis Fungoides; (2) Tuberculosis of Skin.—Mr. Geo. Turner: Doubtful Epithelioma of Penis.—Mr. Hurry Fenwick and Mr. Heycock: Removal of entire Mucous Membrane of Bladder.—Dr. Pasteur: A case of Perforation of the Soft Palate (for diagnosis). Mr. Cadless: Ectopia Vesicæ.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Dr. Kenneth McLeod: Nerve-stretching and Splitting in Localised Interstitial Neuritis, Leprous and otherwise.—Dr. James Greig Smith: The so-called Spontaneous Disappearance of Solid Abdominal Tumours (with three cases).

WEDNESDAY.—HUNTERIAN SOCIETY.—8.30 P.M. Clinical Evening. The President: Cardiac Disease, with Traumatic Aneurysm of the Foot. Dr. Bertrand Dawson: Aneurysm of the Innominate Artery.—Dr. Hingston Fox: Graves' Disease in a Boy aged twelve years.—Dr. Cotman: Carcinoma of the Breast.—Mr. Campbell McDonnell: Tabes Dorsalis without Locomotor Symptoms.—Dr. Arnold Chaplin: Bronchiectasis. Dr. Arthur Davies and Dr. Fred. J. Smith will also show cases. Dr. Rayner D. Batten will exhibit a New Clinical Pulse Manometer.

THURSDAY.—NEUROLOGICAL SOCIETY OF LONDON (20, Hanover-sq., W.). 8.30 P.M., Annual Meeting. Presidential Address by Prof. Ferrier: Recent Work on the Cerebellum.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Living and Card Specimens at 8 P.M.:—Dr. Ernest Clarke: Pulsating Exophthalmos in a Child.—Dr. E. C. Kingdon: Symmetrical Changes at the Macula Lutea in an Infant. Papers: Mr. Jonathan Hutchinson: School Ophthalmia.—Mr. Hill Griffith: Cases of Orbital Tumours.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—Living Specimens at 8 P.M.:—Mr. Eve: Modified Excision of Elbow.—Mr. Pearce Gould: A case of Thoracoplasty.—Dr. Francis Hawkins: Displacement of the Heart in a Child, due to Fibroid Phthisis.—Dr. Sidney Phillips: Rheumatic Nodules in an Adult.—Mr. Turner and Dr. Penrose: A peculiar form of Muscular Atrophy.—Dr. Sansom: A case of Aphasia.—Dr. Mott: (1) Bulbar Paralysis after Thrombotic Necrosis; (2) Paraplegia following Typhoid Fever. Papers at 9 P.M.:—Mr. H. H. Clutton: Three cases of Endosteal Sarcoma of Radius.—Mr. John D. Malcolm: Nephrectomy for Malignant Tumour in a Patient under Two years of age.—Mr. Arbuthnot Lane: (1) Acute General Suppurative Peritonitis secondary to Appendicitis, Removal of Appendix, Recovery; (2) Multiple Epitheliomatous Growths developing in Psoriasis treated with Arsenic more than Thirty Years.

LECTURES AND ADDRESSES.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Lacrymal Affections.—London Throat Hospital, 6a, Portland-st., W., 8 P.M., Dr. E. Law: Examination of Throat and Nose.—Bacteriological Laboratory, King's College, 3 P.M., Prof. Crookshank and Dr. Hewlett: The Examination of Air, Soil, and Water.

SOCIETY OF ARTS.—8 P.M. Mr. Frank Clowes: The Detection and Measurement of Inflammable Gas and Vapour in the Air. (Cantor Lecture.)

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Corner: Hysterical Mania and Delirious Mania.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: Locomotion and Fixation in Plants and Animals.

SOCIETY OF ARTS.—8 P.M. Captain Charles Rolleston: Morocco and its Races.

WEDNESDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Maguire: Cases of Special Interest. Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. S. Morton: Retinal Affections.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Eczema, its Varieties.

WEST LONDON HOSPITAL.—5 P.M. Dr. Hood: The Symptoms of Acute Pneumonia. (Post-graduate Lecture.)

SOCIETY OF ARTS.—8 P.M. Mr. G. Herbert Thrupp: American Carriages.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. J. H. Morgan: Caries.—National Hospital for Paralysed, Bloomsbury, 2 P.M., Dr. Beevor: Cerebral Localisation.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. G. Harley: Gout in relation to Liver Disease.
ROYAL INSTITUTION.—3 P.M. Rev. Canon Ainger: The Life and Genius of Swift.
LONDON SKIN HOSPITAL.—8 P.M. Mr. A. Harbord: Cutaneous Ulcers, their Causes and Treatment.
ROYAL BRITISH NURSES' ASSOCIATION (3, Hanover-sq., W.)—8 P.M. Miss de Pledge: The History and Progress of Nursing in Poor-law Infirmaries.
FRIDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton, 4 P.M., Dr. P. Kidd: Cases of Cardiac Disease.
ROYAL INSTITUTION.—9 P.M. Mr. A. P. Graves: Old Irish Song.
SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. P. Smith: Acute Mania.
ROYAL INSTITUTION.—3 P.M. Prof. W. H. Cummings: English Schools of Musical Composition. (With Musical Illustrations.)

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, January 18th, 1894.

	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Jan. 12	29·92	S.W.	48	47	71	53	44	0·13	Cloudy
,, 13	30·03	S.	43	46	70	49	44	..	Overcast
,, 14	29·91	S.W.	44	44	47	47	43	0·31	Raining
,, 15	30·05	S.W.	42	41	56	48	41	0·22	Cloudy
,, 16	29·88	S.W.	46	45	71	52	40	0·15	Cloudy
,, 17	29·65	S.W.	51	50	58	53	46	0·01	Raining
,, 18	29·46	S.W.	47	46	68	50	46	0·18	Overcast

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

INVALID CHILDREN'S AID ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me, through the medium of THE LANCET, to draw attention to the work and needs of the Invalid Children's Aid Association, a society that has for the last five years been doing its best to alleviate the condition of the sick and crippled children of London. The names of nearly 3000 children have been entered on our books, and during the past year 651 fresh cases have come under our notice. It may be known to some readers of THE LANCET that one part of the work undertaken by the association is to associate each child referred to it with a befriending visitor, and it may be readily deduced from the foregoing figures that ample opportunity for work as a "visitor" offers itself to anyone who is interested in the conditions of child life among the poor of London. In time it is hoped to organise in every union and in every parish of the metropolis a complete and effective system of visiting, and already a number of ladies and one or two gentlemen have undertaken to fill the post of "representative" for a specified district, the hope of each representative being to gather around him or her a band of visitors who will unite in caring for the children of that particular district; but the success of the work must depend upon the amount of personal help voluntarily given, and many more workers are needed. We hope that some of the readers of THE LANCET may feel sufficiently interested in the work of the association to respond to this appeal, and give their names as visitors to the hon. secretary, 18, Buckingham-street, Strand, W.C., who will be glad to give fuller information as to the working of the society.—I am, Sirs, yours faithfully,

TIMOTHY HOLMES, Chairman of Committee.

Buckingham-street, Strand, W.C., Jan. 16th, 1894.

POISONOUS SYMPTOMS FROM THE INHALATION OF CONIUM.

To the Editors of THE LANCET.

SIRS,—A patient (female) suffering from bronchial catarrh was ordered forty drops of a mixture containing compound tincture of benzoin and tincture of conium, equal parts, to be inhaled from a pint of boiling water for ten minutes. Instead of the prescribed dose, however, about two drachms were taken (from carelessness) and put in the boiling water, a shawl placed over the jug and the patient's head, and the steam inhaled for some four or five minutes, when the shawl was flung off and the patient, who was reclining on a sofa, fell back complaining of her limbs feeling "very heavy," and on being asked to raise her arm was quite unable to do so, as was the case with her leg. She then said the objects in the room were "misty" and "seemed a long way off"; the pupils were slightly dilated at this time, and afterwards became much more so; the breathing became very slow and shallow, hardly any inspiratory movement being perceptible. When told to take a deep breath she said, "The breath won't come." Signs of dyspnœa becoming urgent, with cyanosis marked, artificial respiration was commenced and continued for a few minutes on and off till respiration became again normal, the whole time occupied from the cessation of the inhalation being about half an hour. The pulse kept fairly strong and the intellect was quite clear all through; there were two slight relapses in the breathing some hours after, but not sufficient to cause alarm. The specimen of conium used had been administered before in twenty-drop doses as an inhalation, with good results.

I am, Sirs, yours faithfully,

January, 1894. F. W. GUNN, M.D., B.S. (Dunelm.), M.R.C.S., &c.

A CORRECTION.

Messrs. Allen and Hanburys ask to be allowed to correct a slight mistake regarding the names of two remedies referred to by the late Sir Andrew Clark in the lecture which was reported in THE LANCET of the 6th inst. On page 3, column one, paragraph three, the last section should read: "The one is cod liver oil and malt given with food, a preparation called 'bynol,' and the other is a remedy called 'bynin emulsion,' consisting of the hypophosphites, oil, and malt."

Mr. T. Loftus.—We are informed that the coroner for the city of Liverpool always pays the usual fees for making post-mortem examinations and for attendance at inquests to the resident medical officers of the Liverpool workhouse, and to those of the infirmary of the West Derby Union which is situated within his district. We do not know whether this is the coroner to whom our correspondent refers or not. We learn also that the county coroner for the West Derby division of Lancashire pays the guinea fee for a post-mortem examination to the medical officers of the Toxteth workhouse, although he states that he has no right to do so, and he pays them no fee for evidence. The second subsection of Section 22 of the Coroners Act, 1887, 50 and 51 Vict., cap. 71 is as follows:—"Where an inquest is held on the body of a person who has died in a county or other lunatic asylum, or in a public hospital infirmary, or other medical institution, or in a building or place belonging thereto, or used for the reception of the patients thereof, whether the same be supported by endowments or by voluntary subscriptions, the medical officer whose duty it may have been to attend the deceased person as a medical officer of such institution as aforesaid shall not be entitled to such fee or remuneration." No doubt many other coroners do as the coroner for Liverpool. It is inconceivable that the words quoted can be considered as comprising a workhouse, more especially as the question having been raised more than once prior to the passing of this Act six years ago, the subsection would have been so framed as to include workhouses and parish infirmaries if such had been the intention of the Legislature.

Mr. W. Iliffe (Kendal).—Yes.

COPPER-DEPOSITING PERSPIRATION.

WE may be excused if we express some misgivings as to the occurrence of the following phenomenon which is stated by a writer in last week's *Chemical News* to have actually happened to himself. It appears that during his engagement as a machinist in a general repair shop he noticed that whenever a piece of iron or steel came in contact with his perspiration it was at once covered with a bright coating of copper. Shortly after this he left the machine shop, and has not been engaged in any similar industry since, although the perspiration has continued to yield the copper in the manner indicated. It could not therefore be attributed to handling copper or brass implements. Six years prior to this he had been troubled with a small tumour—of bone as was supposed—on the inner front edge of the right tibia, which was sensitive to the touch and about the size of a small pea. In 1881 (eight years after he ceased working as a machinist) the tumour became loose, swelled slightly, and turned as black as coal. It showed no sign of suppuration, although it was very painful. The "growth" was subsequently cut out, and was found to be a piece of corrugated sheet copper *about* $\frac{1}{4}$ *in. square and less than* $\frac{1}{100}$ *in. thick*, which was immediately recognised as a piece of a waterproof gun cap, with which the writer distinctly remembered having been wounded twelve years previously when a boy. The piece of copper, so the writer concludes, had during at least eight years been continuously giving off and distributing through the human body enough copper to brightly copper-plate a piece of iron at any time by rubbing it on the back of the perspiring hand. From an inspection of the size and thickness of the extracted fragment it could not have lost but a few milligrammes. The writer does not add whether he experienced a "coppery" taste in the mouth, or whether he ever noticed any staining (green, for instance) on his underclothing at any time. The case is certainly of interest in connexion with the "toxicological signification of copper."

Mark.—Probably the case is one of birth-palsy, as appears from our correspondent's letter to have been the opinion of the medical practitioners who saw the patient. Although it is unusual to have no mental affection with so much physical, it is not altogether unknown. Little can probably be done for the condition.

A. B. C.—We think that, like most, though not all, other contracts, a notice according to mode of payment would be usual; but possibly a judicial tribunal might take into consideration the condition or the exigencies of the patient in determining such a question.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—It seems a great pity that the question of the title of "Dr." should have developed into a comparison of the degrees of the different schools. Such comparisons, especially when made in the spirit they have been, do no good, but rather engender a good deal of bitter feeling. Every man is naturally proud of his own school, and thinks it as good, if not better, than others; but while, like the proverbial parrot, he may think pretty hard, he should not give vent to his opinion in public print; for, to say the least, it shows a want of good taste and certainly does not increase the *prestige* of our profession in the eyes of the public. After all, whether a medical man is a good one or not depends on the individual himself and the advantage he has taken of the opportunities afforded for acquiring knowledge, rather than on the school from which he hails. The "Dr." question seems to have especially raised national jealousies. Now, I should like to suggest that the somewhat monstrous aspect of the practitioner's door-plate might be greatly relieved by an artistic arrangement of the various national emblems—such as the rose, thistle, or shamrock—around the degrees of the said practitioner. Of course, a limit to the size of the various embellishments would be necessary, as some with American proclivities would probably go in for something large and overshadow his more humble brother. The General Medical Council could, I think, with a week's friendly (?) discussion, arrange the limits.

I am, Sirs, yours faithfully,

Jan. 9th, 1894. PAX.

"ABSENCE OF THE STERNAL ORIGIN OF THE PECTORALIS MAJOR MUSCLE."

To the Editors of THE LANCET.

SIRS,—As Dr. Young does not mention the condition of the mamma in his case (THE LANCET, Jan. 6th, 1894, p. 19), and as I cannot make out its condition from the figure accompanying his notes, I should like to ask him whether its development was in any way defective? It is a remarkable fact that defective development of the sternal origin of the pectoralis major muscle is very frequently correlated with defective mammary development (amazia and micromazia). In a paper on Mammary Variations *per defectum*, published a short time ago in the *Journal of Anatomy* (vol. XXV, p. 306 *et seq.*), I brought together more than a dozen examples of this malformation, and I have since met with other instances of it. I am, Sirs, yours truly,

Preston, Jan. 13th, 1894. W. ROGER WILLIAMS.

"LOCOMOTOR ATAXY TREATED BY PHOSPHATIC INJECTIONS."

WE have received a letter from Dr. Cuylits of Brussels which is so entirely out of all proportion in its length to the space that we are able to offer to the subject that we can only briefly notice the line that he takes in it. Dr. Cuylits recapitulates the symptoms of the patient whose case was originally reported, and maintains that they were obviously tabetic, pointing out at the same time that if they were not, the facts of the patient's extreme illness before treatment and great improvement under treatment would still command attention. He desires to correct a statement that he is at the present time Secretary of the Academy of Medicine in Belgium. We cannot devote further space to this subject.

Dr. Joseph Siguier.—In all the Australian colonies the Medical Board must be first communicated with and the diplomas produced. In some colonies a fee of £1 1s. is charged. It is advisable to have diplomas and certificates of registration endorsed by the consul, as evidence of the applicant's identity is usually required.

"QUININE IN PREGNANCY."

To the Editors of THE LANCET.

SIRS,—I entirely agree with Surgeon-Major Dimmock's remarks in THE LANCET of Dec. 2nd, 1893, as to the harmlessness of quinine in pregnancy. I believe the drug to be absolutely powerless as an originator of uterine action, although its power of intensifying that action, once begun, is well known. I have for years used it fearlessly during pregnancy both in large and small doses, and have never seen any bad effects. I have more than once known large quantities to be taken by women with a view to procure abortion, always without result, and I have seen more than one woman brought into serious danger by her refusal to take it for fear of its causing miscarriage.

I am, Sirs, yours truly,

ROBERT HARVEY, M.D., D.S.O., Surgeon-Colonel, (late Professor of Midwifery, Medical College of Bengal). Chowringhee, Calcutta.

SHOULD MEDICAL OFFICERS OF HEALTH VISIT NOTIFIED CASES?

Mr. C. Welch, F.R.C.S. Eng., &c.—It is not customary for medical officers of health to visit cases of which notifications have been sent to them by registered practitioners, nor is it right for them to do so save with the express consent or at the desire of the practitioner in attendance, on whom the sole responsibility of diagnosis and notification is placed by the law.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

To the Editors of THE LANCET.

SIRS,—In reference to the annotation in THE LANCET of Jan. 12th (p. 108) announcing the legacy under the will of the late Mr. Thomas Bless Pugh, it should be stated that his father and brothers were surgeons of 82, Gracechurch-street, half a century ago.

I am, Sirs, yours faithfully,

Finsbury-pavement, E.C., Jan. 12th, 1894. J. FUNSTON.

THE SODEN FUND.

To the Editors of THE LANCET.

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Swansea, Jan. 14th, 1894. W. F. BROOK

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COMMUNICATIONS not noticed in our present issue shall receive attention in our next.

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